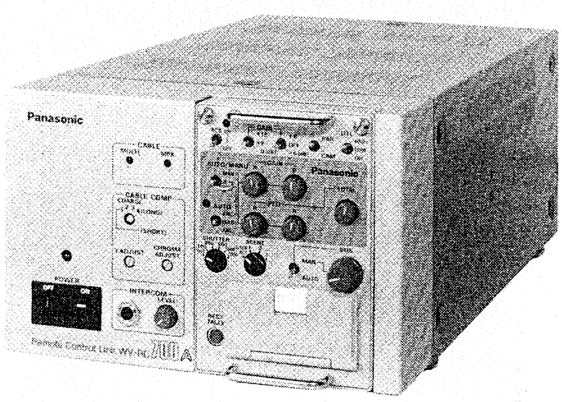
ORDER NO. AVS9307729C8

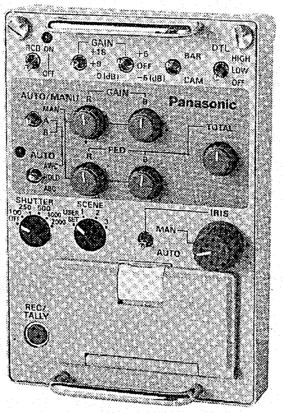
Service Manual

Remote Control Unit WV-RC700A

Remote Control Box WV-CB700AE



WV-RC700A



VW-CB700AE

SPECIFICATIONS

Power Source :	WV-RC700A/A, WV-RC700A/B : 240V AC, 50 Hz, 70W WV-RC700A/G : 230V AC, 50 Hz, 70W
Video Output :	1.0 Vp-p PAL composite / 75 ohms × 2 (BNC connectors)
Gen-lock Input :	1.0 Vp-p PAL composite or black burst signal / 75 ohms or Hi-z looping through × 1 (BNC connectors), auto termination
AUX (Line View) Input :	1.0 Vp-p PAL composite / 75 ohms or Hi-z looping through × 1(BNC connectors), auto termination
R/G/B, Y/PR/PB, Y/C/B Switching Output :	75 ohms × each 1 (BNC connectors)
R/G/B :	0.7 V
Y/C/B :	Y: 0.7 Vp-p C: 0.3 Vp-p
Y/RB/PB :	Y: 1.0 Vp-p PR, PB: 0.525 Vp-p
Sync Output :	4.0 Vp-p / 75 ohms × 1 (BNC)
S-Video Output :	Y: 0.7 Vp-p / 75 ohms × 1 (S connector) C: 0.3 Vp-p 75 ohms × 1 (S connector)
MPX Input/Output :	Composite Video, Gen-lock Video, Remote Control Signal, 85V-110V DC, Intercom/Audio/75 ohms
Audio Output :	−20 dBm (Selectable Inter Communication or Audio)
Intercom Jack :	M-6
Audio Jack :	RCA Pin Jack
Maximum Cable Length :	300 m with studio cable 300 m with cable compesator (Belden 8281)
Switches :	Cable Selection, Cable Length Compensation, High Gain Selection, 6 dB Gain Selection, Colour/Bar Camera Selection, Detail Level Selection, White/Black Balance Selection, Auto White / Auto Black Set, Lens Iris Selection, Scene Selection, Electronic Shutter Speed Selection, ENC/VF Selection, Subcarrier Phase Coase, RCB Operation, Up, Down, Item, Page, User Set

Panasonic

Controls : Luminance Gain Fine, Chroma Gain Fine, Red and Blue Gain, Red and Blue Pedestal Level, Total Pedestal Level, Lens Iris, Fine, Horizontal Phase, Intercom Level
Ambient Operating Temperature : −5°C - +45°C
Ambient Operating Humidity : Less than 90 %
Dimensions : 207 (W) × 132 (H) × 370 (D) mm
Weights : 7.1 kg

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

ACCESSORIES

4-pin Connector (For Tally / Intercom)	1pc.
N Connector	1pc.

OPTIONAL ACCESSORIES

Colour Camera	WV-F700, WV-F500 series
Studio Cable	WV-CA26U15 / WV-CA26U30 / WV-CA26U100
RCU Rack Mount Frame	WV-Q70
RCB Cable	WV-CA10B25 / WV-CA10B50
Cable Joint Adaptor	WV-CA26T26
26/32 Conversion Cable	WV-CA26AT32
32/26 Conversion Cable	WV-CA32T26

WV-CB700A
SPECIFICATIONS

Video Output : 1.0 Vp-p PAL composite / 75 ohms × 1 (BNC connectors)
Gen-lock Input : 1.0 Vp-p PAL composite or black burst signal / 75 ohms × 1 (at camera head operating) (BNC connectors)
Intercom Jack : M-6
Maximum Cable Length : Approx. 25m with the optional RCB Cable WV-CA10B25.
Approx. 50m with the optional RCB Cable WC-CA10B50.
Switches : RCB Operation, High Gain Selection, 6 dB Gain Selection, Colour Bar/ Camera Selection, Detail Level Selection, White/Black Balance Selection, Auto White/Auto Black Set, Lens Iris Selection, Scene Selection, Electronic Shutter Speed Selection, Down, Up, Item, Page, ENC/VF Selection, User Set Switch
Controls : Red and Blue Gain, Red and Blue Pedestal Level, Total Pedestal Level, Lens Iris, Subcarrier Phase Corse and Fine, Horizontal Phase for Gen-lock
Ambient Operating Temperature : −5°C - +45°C
Ambient Operating Humidity : Less than 90 %
Dimensions : 90 (W) × 131 (H) × 51.5 (D) mm
Weights : 0.37 kg

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

ACCESSORY

RCB Cable (Approx. 2 m)	1pc.

OPTIONAL ACCESSORIES

Colour Camera	WV-F700 or WV-F500 series
Remote Control Unit	WV-RC700A
RCB Cable	WV-CA10B25/WV-CA10B50

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICEING TO QUALIFIED SERVICE PERSONNEL

This symbol warns the user that uninsuland voltage within the unit may have suificient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that impotant literature concerning the operation and maintenance of this has been included.
Therefore, it should be read carefully in order to avoid any problems.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the " ⚠ " mark on the schematic diagram and the replacement parts list It is essential that these critical parts should be repleced with manufacture's specilied parts to prevent shock, fire, or other hazards
Do not modify the original design without permission of manufacture

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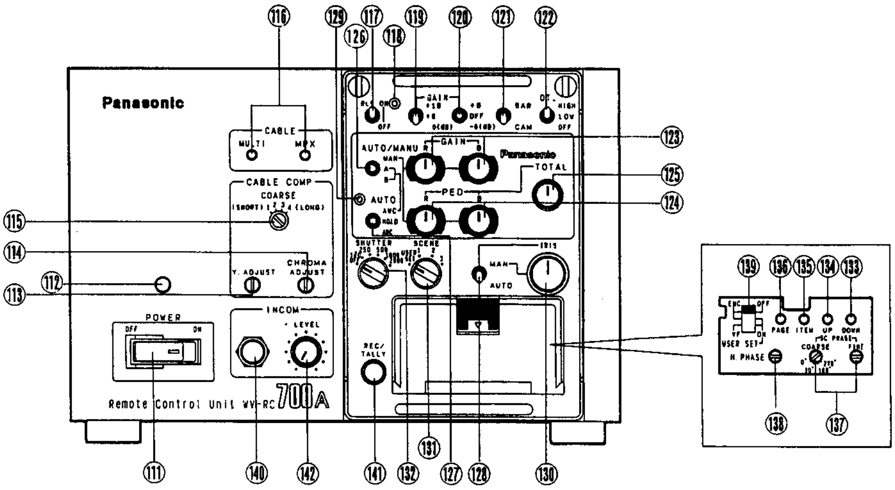
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

REMOTE CONTROL UNIT WV-RC700A
REMOTE CONTROL BOX WV-CB700AE


116
129
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Panasonic
CABLE
MULTI
MPX
CABLE COMP
COARSE
CHROMA ADJUST
Y. ADJUST
POWER
OFF
ON
INCOM
LEVEL
REC/TALLY
AUTO/MANU
GAIN
PED
TOTAL
SHUTTER
SCENE
IRIS
MAN
AUTO
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USER SET
H PHASE
PAGE
ITEM
UP
DOWN
SC PHASE
COARSE
FINE
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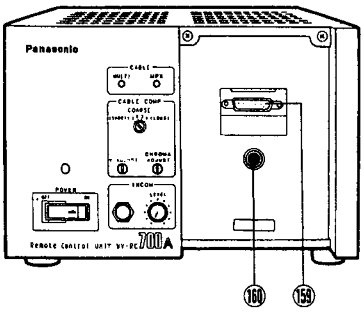
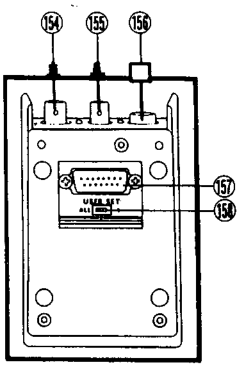
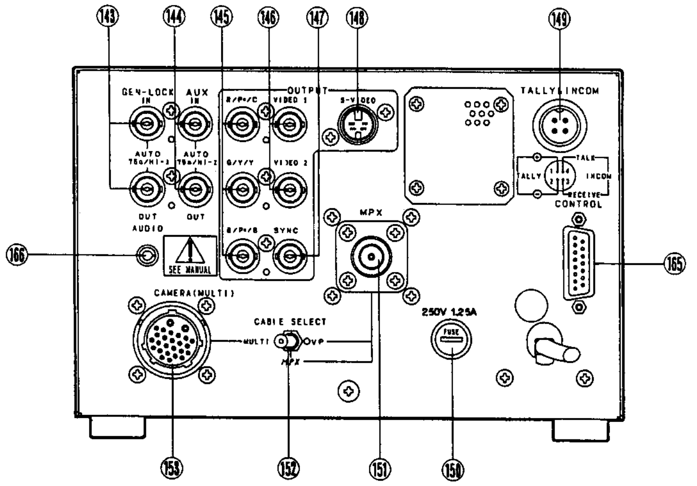

Panasonic
700A
160
159


154
155
156
157
158
USER SET
ALL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AUX IN
OUTPUT
VIDEO 1
S-VIDEO
VIDEO 2
SYNC
AUTO
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AUDIO
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MPX
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CABLE SELECT
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250V 1.25A
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Note:

The numbering of the each item is same as the Operating Instructions of WV-F700 or WV-F500 series.

111. Power Switch (POWER, ON/OFF)
This switch turns on and off the power of the Remote Control Unit (RCU).

112. Power Indicator
This switch lights red whenever the unit is operating.

113. Luminance Gain Fine Control (Y ADJUST)
This control allows for fine adjustment of the luminance signal level for matching the levels of all cameras in a system. Adjust this control only after having set the Cable Length Compensation Switch (115) to the correct position.

114. Chroma Gain Fine Control (CHROMA ADJUST)
This control allows for fine adjustment of the chroma signal level for matching the chroma levels of all the cameras in a system. Adjust this control only after having set the Cable Length Compensation Switch (115) to the correct position.

115. Cable Length Compensation Switch (CABLE/COMP)
This switch is used to compensate for extensive cable lengths used with the 26-pin multi-cable between the camera and Remote Control Unit (RCU).

1. Use for cable length of less than 75m
2. Use for cable length of 75-150m
3. Use for cable length of 150-230m
4. Use for cable length of 230-300m

This switch is also used to compensate for extensive cable lengths used with the coaxial cable (5C-2V) between the camera and Remote Control Unit (RCU).

1. Use for cable length of less than 150m
2. Use for cable length of 150-300m
3. Not available
4. Not available

116. Cable Indicator (CABLE, MULTI/MPX)
This indicator shows the setting position of the Cable Selection Switch (152) on the rear panel.

117. Remote Control Box (RCB) Operation Switch (RCB)
When connecting the Remote Control Box to the camera without using the Remote Control Unit, set this switch to ON position. When the RCB is installed in the RCU this switch is inoperative.

118. Remote Control Box (RCB) Indicator (ON/OFF)
This indicator lights while control data is communicated between the camera and Remote Control Unit (RCU) or Remote Control Box (RCB).

119. High Gain Selection Switch (0 dB/+9 dB/+18 dB)
Normally set this switch to the 0 dB position. Positions +9 dB and +18 dB increase the video output amplitude for dark scenes and are equivalent to opening the lens iris 1.5 or 3 F-steps, respectively.

120. 6dB Gain Selection Switch (+6 dB/OFF/−6 dB)
Normally set this switch to OFF position. By the combination of this switch with the High Gain Selection Switch (119), fine adjustment of the gain level is available.

121. Colour Bar/Camera Selection Switch (BAR/CAM)
In a system configuration, this switch is used for signal selection between camera mode and colour bar mode.

BAR:
A colour bar signal is provided from the Video Output Connector (146) on the Remote Control Unit (RCU).

CAM:
The actual picture, as picked up through the lens, is displayed.

122. Detail Level Selection Switch (DTL, LEVEL-HIGH/LOW/OFF)
The detail/aperture level can be selected by this switch in three steps. Set this switch to the desired position while observing the sharpness of the picture.

123. Red and Blue Gain Controls (R GAIN/B GAIN)
These controls are used to manually adjust the white balance.
These controls only work when the White/Black Balance Selection Switch (126) is set to the MANU position.
Turn the controls clockwise to increase the red and blue signal levels, and counterclockwise to decrease these levels.

Note:
As these controls employ Digital Processing, the Red and Blue signal levels will be changed in discrete steps.

124. Red and Blue Pedestal Level Controls (PED, R/B)
The black balance can be set manually by these controls when the White/Black Balance Selection Switch (126) is set to the MANU position. Turn these controls clockwise to increase the red and blue pedestal levels, and counterclockwise to decrease the levels.

Note:
As these controls employ the Digital Processing, these levels will be changed in the steps.

125. Total Pedestal Level Control (TOTAL PEDESTAL)
This control can adjust the pedestal level of the video signal (luminance) for matching the black level between two or more cameras in a system. Turn this control clockwise to increase the pedestal level, and counterclockwise to decrease the level.

Note:
As this control employs the Digital Processing, this level may be changed in the step.

126. White/Black Balance Selection Switch (AUTO/MANU,MAN/A/B)
This switch is used to select the white balance and black balance modes as follows:

MAN:
The white balance and black balance can be adjusted by the Red and Blue Gain Controls (123) and the Red and Blue Pedestal Level Controls (124).

A: The White Balance can be set automatically by pressing the Auto White/Auto Black Set Switch (127) upwards. The setting is stored in memory A.

B: Similar to A, but the setting is stored in memory B.

Note:
Two white balance setting, one each for different lighting conditions such as indoor and outdoor, may be stored in the two memories, A and B.

127. Auto White/Auto Black Set Switch (AWC/HOLD/ABC)
This switch sets the white balance and black balance automatically as follows:

AWC:
This position is used for setting the white balance when the White/Black Balance Selection Switch (126) is set to the A or B position of the White/Black Balance Selection Switch. White balance adjustment is required when "AWC A NG" or "AWC B NG" is displayed in the viewfinder or when the Auto Warning Indicator (129) lights.

HOLD:
In this position, the white and black balances set at the AWC or ABC position can be held fixed, if so desired, for at least one year.

ABC:
This position is used for setting the black balance when the White/Black Balance Selection Switch (126) is set to the A or B position. Black balance adjustment is required when "ABC NG" is displayed in the viewfinder or when the Auto Warning Indicator (129) on the Remote Control Unit (RCU) lights.

Note:

Since the black balance adjustment is always automatically performed the picture will flash in the viewfinder and on the monitor screen while the black balance is being set. This flashing indicates that the adjustment is currently being performed and will cease once the adjustment is completed.

128. Lens Iris Selection Switch (IRIS, MAN/AUTO)

This switch is used to set the lens iris of the auto iris servo control zoom lens as follows.

Auto:

The iris level of the lens is controlled automatically.

Note:

Be sure to set the Iris Control Selection Switch on the zoom lens to the AUTO posiiton.

MAN:

The iris level of the lens is controlled to the desired level by using the Lens Iris Control (130).

129. Auto Warning Indicator (AUTO)

This indicator blinks while the white balance or black balance is being automatically set. It goes out once the white and black balances have been correctly set. This indicator lights when the white or black balance is set improperly. In this case, carry out the automatic setting procedure for white and/or black balance.

130. Lens Iris Control (IRIS)

The iris level of the zoom lens can be manually controlled by turning this control when the Lens Iris Selection Switch (128) is set to the MAN position.

131. Scene Selection Switch (SCENE)

This switch is used to select the most suitable camera conditions, depending on scene conditions, to obtain the best picture possible.

132. Electronic Shutter Speed Selection Switch (OFF/120/250/500/1000/2000)

This switch is operative only when a camera featuring the electronic shutter is connected with the Remote Control Unit (RCU).
When fast-moving objects are shot at the slow shutter speeds typically found in conventional cameras they will appear blurred. The WV-F700 camera, however, features an electronic shutter function from which the following speeds can be selected: 1/120,1/250,1/500,1/1000 or 1/2000 of a second. As a result, blur-free recording of high-speed action, such as car racing, golf swings, gymnastics, birds in flight is possible.
The selection of shutter speed is made by pressing this switch.

OFF:

Set this switch to this position when recording normally with standard shutter speeds.

1/120,1/250,1/500,1/1000,1/2000:

Choose the suitable shutter speed from these.

133. Down Switch (DOWN)

This switch is used to decrease the set value in the item pointed out by the cursor.

134. Up Switch (UP)

This switch is used to increase the set value in the desired item pointed out by the cursor.

135. Item Switch (ITEM)

This switch is used to choose the item in the set-up menus.

136. Page Switch (PAGE)

This switch is used to choose the desired set-up menu from the four menus.

137. Subcarrier Phase Coarse and Fine Controls (SC PHASE COARSE/FINE)

These controls allow for adjustment of the camera signal subcarrier phase from 0° to 360°, to match the phase with that of the burst signal at the Gen-lock Input Connector (143) in a system configuration.
The COARSE control adjusts the subcarrier phase from 0° to 360° in 90° steps, while the FINE control allows for continuous fine adjustment over a range of 90°.

138. Horizontal Phase Control for Gen-lock (H PHASE)

The horizontal phase of the camera signal can be adjusted to match the horizontal phase of the signal at the Gen-lock Input Connector (143).

139. ENC/VF Selection Switch (ENC/VF, OFF/ON)

This switch selects Encoder output or EVF (black and white) output from the Video Output Connector and whether the User Set Function is available as follows:

1. Switch set to position #1:
   Encoder is output from the Video Output Connector on the RCB and the User Set function is not available.
2. Switch set to position #2:
   Encoder is output from the Video Output Connector on the RCB and the User Set function is available.
3. Switch set to position #3:
   EVF (black and white) signal is output from the Video Output Connector on the RCB, User Set function is available and the User Set menu is displayed on the monitor.

140. Intercom Jack (INCOM)

This jack is used for communications between the camera operator and Remote Control Unit (RCU) operator in a system configuration with a Special Effects Generator.

141. Tally Indicator (REC/TALLY)

When the Remote Control Unit (RCU) is used in conjuction with a Special Effects Generator, the Tally Indicator inside the viewfinder as well as this indicator on the Remote Control Unit (RCU) will light to indicate that recording is in progress.

Note:

When using the Remote Control Box (RCB) in the Remote Control Unit (RCU), the recording start/stop function is not available.

142. Intercom Level Control (INTERCOM, LEVEL)

Use this control to adjust the volume level in the headset connected to the Intercom Jack (140).

143. Gen-lock Input Connectors (BNC)
(GEN-LOCK IN AUTO 75Ω/HI-Z OUT)

These connectors receive the gen-lock signal (black burst or composite) from the Special Effects Generator for system reference.
When connecting a coaxial cable with BNC connector to the Gen-lock Input Connector (143), the high impedance video loop is automatically selected. At all other times, these connectors are automatically terminated with 75 ohms.

Caution:

As this connector is in parallel connection with the Remote Control Box Gen-lock Input Connector (155), do not input gen-lock signals to both of these connectors simultaneously.

144. Auxiliary Input Connectors
(AUX IN-AUTO/75Ω HI-Z OUT)

These connectors receive the lineview signal from a Special Effects Generator. Two connectors are provided for bridging or looping application.
When connecting a coaxial cable with BNC connector to this connector, this connector is automatically terminated with 75 ohms.

145. Red, Green and Blue Output Connectors
(OUTPUT-R/PR/C, G/Y/Y, B/PB/B)

Signals supplied from these connectors are selected by the RCU/VTR Signal Selection Switch on the Camera Adaptor.

Note:

The RCU/VTR Signal Selection Switch on the Camera Adaptor has been set to the ENC position at the factory.

146. Video Output Connectors
(OUTPUT-VIDEO 1, VIDEO 2)

These connectors supply a composite video signal to a Special Effects Generator, a Video Monitor or a VTR.

Note:

This connector is in parallel connection with the Monitor Output Connector (154) on the Remote Control Box (RCB).

147. Sync Output Connector (SYNC OUTPUT)

This Connector supplies a negative 4Vp-p/75 sync signal to the Sync Input of an RGB Colour Video Monitor for synchronization.

148. S-Video Output Connector (S-VIDEO)

This connector outputs the Y/C signal when the RCU/VTR Signal Selection Switch on the camera adaptor is set to the Y/C/B Position.

149. Tally and Intercom Input Connector
(TALLY & INTERCOM)

Connect a 4-pin cable between this connector and the Tally and Intercom output of the Special Effects Generator.

150. Fuse (250V 1.25A)

151. Multiplex Connector (MPX)

This connector is connected to the Multiplex Connector of the camera with coaxial cable (5C-2V or equal).

Notes:

When using this connector, set the Cable Selection Switch (152) to MPX position.

- When using this unit with the VP Multiplex system, be sure to set the Cable Selection Switch (152) to the VP position.
- **Approx. 100V DC is output while operation.**

152. Cable Selection Switch
(CABLE SELECT, MULTI/MPX/VP)

Set this switch to the MULTI or MPX position according to the control cable used.

MULTI:

Select this position when the 26-pin cable (Multi cable) is used to control the camera.

MPX:

Select this position when the coaxial cable (5C-2V) is used to control the camera.

VP:

Select this position when the coaxial cable (5C-2V) is used to control and power the camera in the VP Multiplex system.

Caution:

Do not use the multi cable and the coaxial cable together.

153. Multi-cable Connector (CAMERA)

This connector is connected with the VTR/RCU Connector by using the multi-cable (26-pin).

Note:

Be sure to set the Cable Selection Switch (152) to the MULTI position.

154. Monitor Output Connector of the Remote Control Box (RCB)

As this connector is in parallel connection with the VIDEO 2 OUTPUT Connector (146), do not output the signal simultaneously from both connectors.

155. Gen-lock Input Connector of Remote Control Box

This connector is used to input the gen-lock signal to the Remote Control Box when using the Remote Control Box extended from the Remote Control Unit.

156. Remote Control Unit Extension Connector

This connector is used to extend the Remote Control Box from the Remote Control Unit or from the camera by using the optional RCB cable (WV-CA10B25/WV-CA10B50).

The maximum cable length for the extension is 100m.

Refer to the following table.

Cable length	(m)	2	25	50	100
Decrement		10%	15%	20%	30%

Note:

As the video level is changed by using various cable lengths, under certain conditions it may be out of the specification for the WV-F700 or WV-F500 series.

157. Remote Control Unit Connector

This connector is used for directly connecting with the Remote Control Box Connector (159) on the Remote Control Unit.

Note:

When the Control Connector (165) is used, be sure to use this connector if the Remote Control Box is extended.

158. User Set Switch (USER SET)

By setting this switch when the Scene Selection Switch (131) is set to the USER SET position, the page selection of the set up menus is available as follows.

All:

All the pages (page1-page4) in the set up menu are displayed by setting this switch to this position.

1: Page 1 and 2 are displayed by setting this switch to this position.

2: Only Page 3 is displayed by setting this switch to this position.
Refer to "THE USER SETTING OPERATION" on page Operating Instructions of WV-F700 or WV-F500 series for the details.

159. Remote Control Box Connector

This connector is connected directly with the Remote Control Unit Connector (157) on the Remote Control Box.

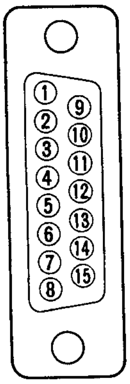
160. Remote Control Box Extension Connector

This is connected to the Remote Control Unit Extension Connector (156) on the Remote Control Box by using the optional cable.

Refer to item 156 for more details.

165. Control Connector (CONTROL)

This connector is connected with the control connector of the pan/tilt unit or lens control by using the multi-cable (15-pin).



1	LEFT
2	RIGHT
3	UP
4	DOWN
5	—
6	FOCUS
7	—
8	ZOOM
9	DEFROSTER
10	WIPER
11	—
12	+5V
13	+V (+7.5V)
14	−V (+2.5V)
15	GND

Pan/Tilt or Housing Control Voltage

	Operation	Stop
LEFT	2.5V	0
RIGHT	2.5V	0
UP	2.5V	0
DOWN	2.5V	0
DEFROSTER	2.5V	0
WIPER	2.5V	0

Lens Control Voltage

	Speed	
	Low	High
NEAR	4.0V	2.5V
FAR	6.0V	7.5V
WIDE	4.0V	2.5V
TELE	6.0V	7.5V

Note:

The impedance for the control voltage should be 2 kohms or less.

166. Audio Output Jack (AUDIO OUT)

By setting the Audio Level Selection Switch of the Camera Adaptor WV-AD700AS to the −20 dB position, the audio output is available.

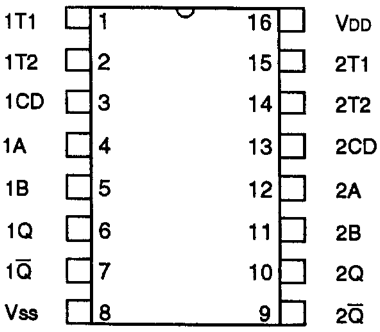
Note:

In case of Multiplex or VP Multiplex operation, set the Audio Level Selection Switch of the Camera Adaptor WV-AD700AS to the −20 dB position, the Switch 1 on the Audio Board in side the Camera Adaptor WV-AD700AS and Switch 2 on the MOD board inside this unit to the AUDIO position for the Audio Output function to be activated.

Circuit Description

Remote Control Unit WV-RC700A

1. IC25 on the Modulator Board, IC9 on the Demodulator Board and IC209 on the Power Board are using the Dual Precision Retriggerable Monostable Multivibrator IC MN4538BS and/or YWUPD4538BG.
   Description of this IC is as follows:


1T1 1 16 VDD
1T2 2 15 2T1
1CD 3 14 2T2
1A 4 13 2CD
1B 5 12 2A
1Q 6 11 2B
1Q̄ 7 10 2Q
Vss 8 9 2Q̄

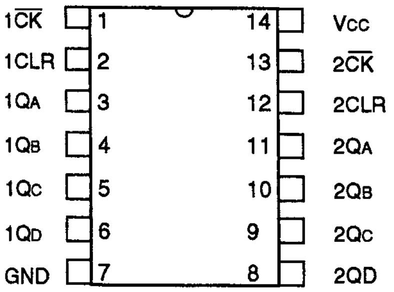
(TOP VIEW)

Truth Table

INPUT			OUTPUT		NOTE
A	B	CD	Q	$\overline{Q}$	
↑	H	H	⊓	⊔	Output Pulse
↑	L	H	L	H	Inhibit
H	↓	H	L	H	Inhibit
L	↓	H	⊓	⊔	Output Pulse
*	*	L	L	H	Inhibit

* : Don't care.

2. IC17 on the Modulator Board is using the Dual Binary Counter IC MN74HC393S.
   Description of this IC is as follows:


1CK̄ 1 14 Vcc
1CLR 2 13 2CK̄
1QA 3 12 2CLR
1QB 4 11 2QA
1QC 5 10 2QB
1QD 6 9 2QC
GND 7 8 2QD

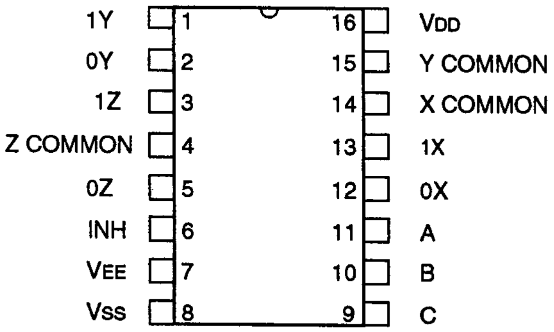
(TOP VIEW)

Truth Table

INPUT		OUTPUT			
$\overline{CK}$	CLR	QA	QB	QC	QD
*	H	L	L	L	L
↓	L	Count Up			
↑	L	Count Down			

* : Don't care.

3. IC14 on the Demodulator Board, IC6 on the Rear Board, and IC402 on the Power Board are using the Triple 2-ch Analog Multi-plexer/Demultiplexer IC MN4053BS and/or YWUPD4053BG.
   Description of this IC is as follows:


1Y 1 16 VDD
0Y 2 15 Y COMMON
1Z 3 14 X COMMON
Z COMMON 4 13 1X
0Z 5 12 0X
INH 6 11 A
VEE 7 10 B
Vss 8 9 C

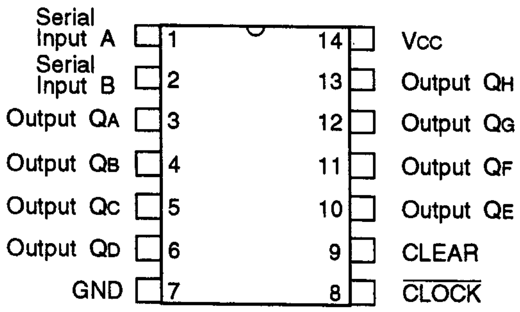
(TOP VIEW)

Truth Table

INHIBIT	C	B	A	X COMMON	Y COMMON	Z COMMON
L	L	L	L	0X	0Y	0Z
L	L	L	H	1X	0Y	0Z
L	L	H	L	0X	1Y	0Z
L	L	H	H	1X	1Y	0Z
L	H	L	L	0X	0Y	1Z
L	H	L	H	1X	0Y	1Z
L	H	H	L	0X	1Y	1Z
L	H	H	H	1X	1Y	1Z
H	*	*	*	NONE	NONE	NONE

* : Don't care.

4. IC22 on the Modulator Board is using the 8-bit Shift Register IC UPD74HC164G.
   Description of this IC is as follows:


Serial Input A 1 14 Vcc
Serial Input B 2 13 Output QH
Output QA 3 12 Output QG
Output QB 4 11 Output QF
Output QC 5 10 Output QE
Output QD 6 9 CLEAR
GND 7 8 CLOCK

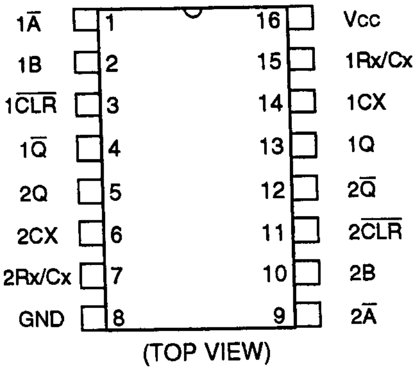
(TOP VIEW)

Truth Table

INPUT		Function
$\overline{CLEAR}$	CLOCK	
H	↑	Right Shift
⊔	*	Clear

* : Don't care.

5. IC8 and IC10 on the Demodulator Board, and IC7 on the Power Board are using the Dual Monostable Multivibrator IC MN74HC221S.
Description of this IC is as follows:

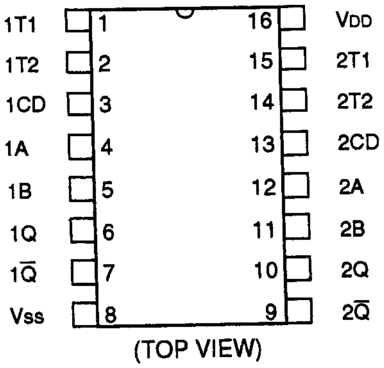

1$\overline{A}$ 1
1B 2
1$\overline{CLR}$ 3
1$\overline{Q}$ 4
2Q 5
2CX 6
2Rx/Cx 7
GND 8
Vcc 16
1Rx/Cx 15
1CX 14
1Q 13
2$\overline{Q}$ 12
2$\overline{CLR}$ 11
2B 10
2$\overline{A}$ 9
(TOP VIEW)

Truth Table

INPUT			OUTPUT		NOTE
$\overline{A}$	B	$\overline{CLR}$	Q	$\overline{Q}$	
↓	H	H	⎍	⊔	Output Pulse
*	L	H	L	H	Inhibit
H	*	H	L	H	Inhibit
L	↑	H	⎍	⊔	Output Pulse
L	H	↑	⎍	⊔	Output Pulse
*	*	L	L	H	Inhibit

* : Don't care.

6. IC3 on the Video Board is using Dual Monostable Multivibrator IC YWUPD4528BG.
Description of this IC is as follows:

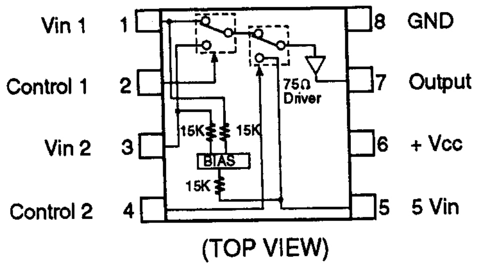

1T1 1
1T2 2
1CD 3
1A 4
1B 5
1Q 6
1$\overline{Q}$ 7
Vss 8
VDD 16
2T1 15
2T2 14
2CD 13
2A 12
2B 11
2Q 10
2$\overline{Q}$ 9
(TOP VIEW)

Truth Table

INPUT			OUTPUT		NOTE
A	B	CD	Q	$\overline{Q}$	
↑	H	H	⎍	⊔	Output Pulse
↑	L	H	L	H	Inhibit
H	↓	H	L	H	Inhibit
L	↓	H	⎍	⊔	Output Pulse
*	*	L	L	H	Inhibit

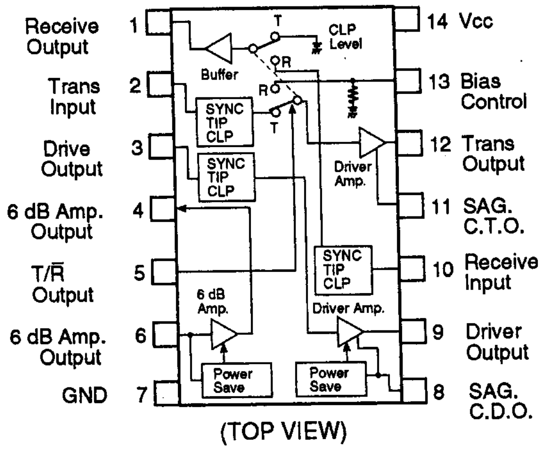
* : Don't care.

7. IC204 and IC304 on the Video Board are using the 3-Input Video Switch IC YWNJM2243M.
Description of this IC is as follows:

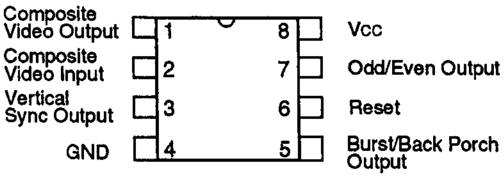

Vin 1 1
Control 1 2
Vin 2 3
Control 2 4
8 GND
7 Output
6 + Vcc
5 5 Vin
75Ω Driver
15K
15K
BIAS
15K
(TOP VIEW)

Control 1	Control 2	Output
L	L	Vin 1
H	L	Vin 2
L/H	H	Vin 3

8. IC611, IC404, and IC502 on the Video Board are using the Video Signal Interface IC YWCX20095A.
Description of this IC is as follows:

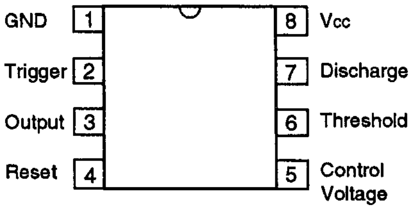

Receive Output 1
Trans Input 2
Drive Output 3
6 dB Amp. Output 4
T/$\overline{R}$ Output 5
6 dB Amp. Output 6
GND 7
14 Vcc
13 Bias Control
12 Trans Output
11 SAG. C.T.O.
10 Receive Input
9 Driver Output
8 SAG. C.D.O.
T
CLP Level
Buffer
R
R
T
SYNC TIP CLP
SYNC TIP CLP
Driver Amp.
SYNC TIP CLP
6 dB Amp.
Driver Amp.
Power Save
Power Save
(TOP VIEW)

9. IC9 on the Modulator Board, and IC2 on the Video Board are using the Video Sync Separator IC YWLM1881M.
Description of this IC is as follows:

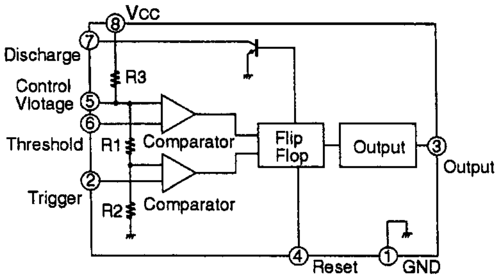

Composite Video Output
1
8
Vcc
Composite Video Input
2
7
Odd/Even Output
Vertical Sync Output
3
6
Reset
GND
4
5
Burst/Back Porch Output

(TOP VIEW)

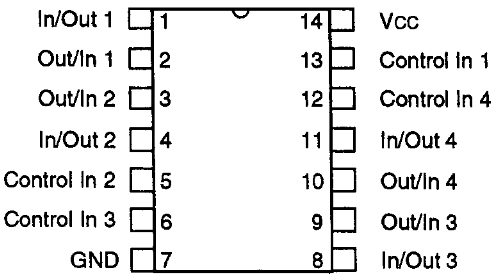
10. IC203 on the Power Board is using the Timer IC NJM555M.
Description of this IC is as follows:


GND
1
Trigger
2
Output
3
Reset
4
8
Vcc
7
Discharge
6
Threshold
5
Control Voltage

(TOP VIEW)


Vcc
8
Discharge
7
R3
Control Vlotage
5
6
Threshold
R1
Comparator
Flip Flop
Output
3
Output
Trigger
2
R2
Comparator
4
Reset
1
GND

11. IC3 on the Power Board is using the Quad Analog Switch/Multiplexer IC YWUPD4066BG.
Description of this IC is as follows:

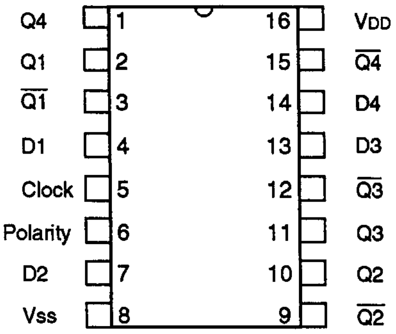

In/Out 1
1
Out/In 1
2
Out/In 2
3
In/Out 2
4
Control In 2
5
Control In 3
6
GND
7
14
Vcc
13
Control In 1
12
Control In 4
11
In/Out 4
10
Out/In 4
9
Out/In 3
8
In/Out 3

(TOP VIEW)

Truth Table

Input	Switch
Control	I/O – O/I
L	OFF
H	ON

12. IC205 on the Power Board is using the Quad Clocked D-Latch IC MN4042BS.
Description of this IC is as follows:


Q4
1
Q1
2
$\overline{Q1}$
3
D1
4
Clock
5
Polarity
6
D2
7
Vss
8
16
VDD
15
$\overline{Q4}$
14
D4
13
D3
12
$\overline{Q3}$
11
Q3
10
Q2
9
$\overline{Q2}$

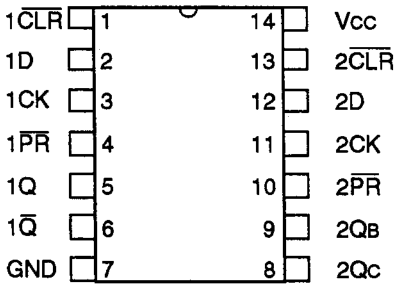
(TOP VIEW)

Truth Table

INPUT		OUTPUT
CLOCK*1	POLARITY	Qn*2
H	H	Dn
L	L	Dn
↑	L	Latch
↓	H	Latch

*1 : Level Change
*2 : n = 1 - 4

13. IC501 on the Power Board is using the Dual D-FFs with Preset and Clear IC MN74HC74S.
Description of this IC is as follows:


1$\overline{CLR}$
1
1D
2
1CK
3
1$\overline{PR}$
4
1Q
5
1$\overline{Q}$
6
GND
7
14
Vcc
13
2$\overline{CLR}$
12
2D
11
2CK
10
2$\overline{PR}$
9
2QB
8
2QC

(TOP VIEW)

Truth Table

INPUT				OUTPUT		Function
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	*	*	L	H	Clear
H	L	*	*	H	L	Preset
L	L	*	*	H	H	——
H	H	L	↑	L	H	——
H	H	H	↑	H	L	——
H	H	*	↓	Qn	$\overline{Qn}$	No Change

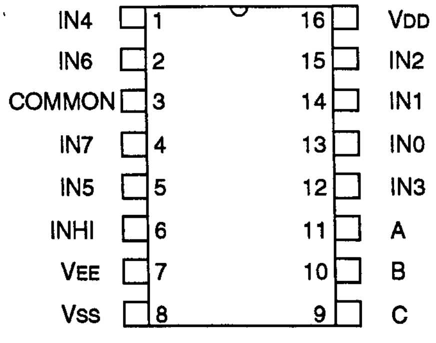
* : Don't care.

REMOTE CONTROL BOX WV-CB700AE

1. The pin identification of the Microprocessor IC14 (MN18888CUL) on the Main Board is as follows:

Pin No.	Name	In/Out	Description
1	ADC2	In	RCB Control signal
2	ADC1	In	Control In 2 signal
3	ADC0	In	Control In 1 signal
4	VREF(–)	–	Not used.
5	ADSH	–	Capacitor input for the Sample Hold of ADC.
6	AVss	–	Ground
7	P67	–	Not used.
8	P66	–	Not used.
9	P65	–	Not used.
10	P64	–	Not used.
11	P63	–	Not used.
12	P62	–	Not used.
13	P61	–	Not used.
14	P60	–	Not used.
15	EXI	–	Ground
16	P57	–	+5V(A)
17	DOWN	In	User Set Down signal
18	UP	In	User Set Up signal
19	ITEM	In	User Set Item signal
20	PAGE	In	User Set Page signal
21	REC TRIG	In	Rec Trigger signal
22	P51	In	Control In 3 signal
23	TALLY CALL	In	Tally Call signal
24	RST	In	Reset signal Active "L"
25	OSC1	In	8MHz System Clock Osc. Input
26	OSC2	Out	8MHz System Clock Osc. Output
27	Vss	–	Ground
28	IRQ3	–	+5V(D)
29	SYNC IN	–	+5V(D)
30	IRQ2	In	V-SYNC signal
31	IRQ1	In	H-SYNC signal
32	IRQ0	In	External Interruption Input signal
33	PWH OUT	–	+5V(D)
34	TCIO 1	–	+5V(D)
35	TCIO 0	–	+5V(D)
36	SBT	In	Sync Serial Interface Clock Input signal
37	SBI	In	Sync Serial Interface Data Input signal
38	SBO	Out	Sync Serial Interface Data Output signal
39	RXD	In	Serial Data Input signal
40	TXD	Out	Serial Data Output signal
41	P47	Out	PCB Power signal
42	SEL C	Out	Selection C signal
43	SEL B	Out	Selection B signal
44	SEL A	Out	Selection A signal
45	P43	Out	Auto Warning signal
46	P42	Out	Tally signal
47	P41	Out	Output Data (MSB)
48	P40	Out	Output Data
49	P77	Out	Output Data
50	P76	Out	Output Data
51	P75	Out	Output Data
52	P74	Out	Output Data
53	P73	Out	Output Data
54	P72	Out	Output Data
55	P71	Out	Output Data
56	P70	Out	Output Data (LSB)
57	VDD	–	+5V
58	AVDD	–	+5V(A)
59	VREF(+)	In	+4V
60	DAC1	–	Not used.
61	DASH 1	–	Capacitor input for the Sample Hold of DAC1.
62	DAC0	–	Not used.
63	DASH 0	–	Capacitor input for the Sample Hold of DAC0.
64	ADC3	–	+1V

2. Analog Multiplexer/Demultiplexer IC6, 7 and 9 on the Switch Board, and IC8 on the Main Board (MN4051BS and/or YWUPD4051BG) are as follows:



(TOP VIEW)

Truth Table

INHIBIT	C	B	A	COMMON
L	L	L	L	IN0
L	L	L	H	IN1
L	L	H	L	IN2
L	L	H	H	IN3
L	H	L	L	IN4
L	H	L	H	IN5
L	H	H	L	IN6
L	H	H	H	IN7
H	*	*	*	NONE

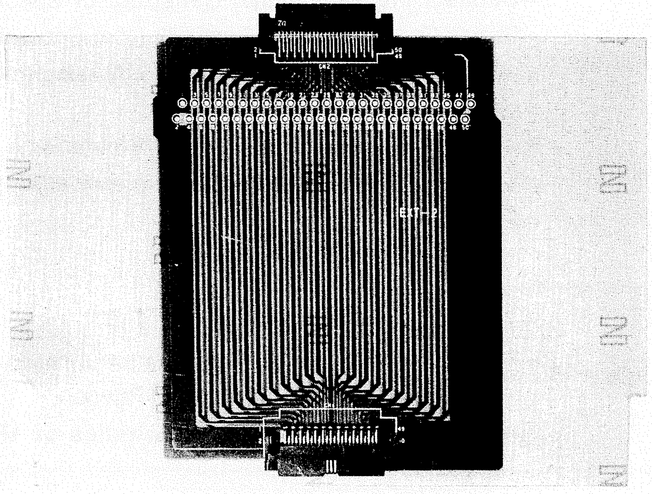
* : Don't care.

ADJUSTMENT PROCEDURE

1. Test Equipment

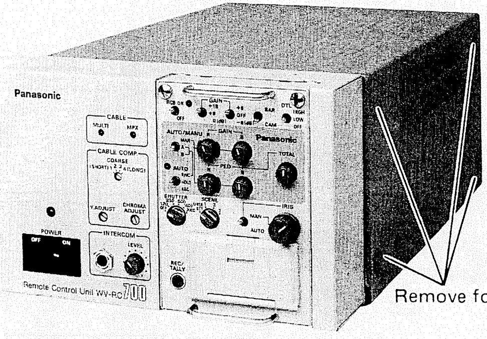
The following Test Equipments are required for adjustment of the Remote Control Unit WV-RC700A.

- Oscilloscope
- Waveform Monitor
- Vectorscope
- Underscanned Color Video Monitor
- Digital Voltmeter
- Frequency Counter
- DC Power Supply Unit (DC 12V, 2A or more)
- Special Effects Generator
- Test Signal Generator
- Remote Control Box WV-CB700AE (Completely adjusted.)
- Camera WV-F700AE (Completely adjusted.)
- Camera Adaptor WV-AD700ASE (Completely adjusted.)
- Power Separator WV-PS700E (Completely adjusted.)
- 1.5" Electronic Viewfinder WV-VF40 (Completely adjusted.)
- Studio Cable WV-CA26U30 (30m)
- Coaxial Cable 5C2V (3m)
- RCB Cable (10P)
- Extension Board (YWV0EA0177AN)



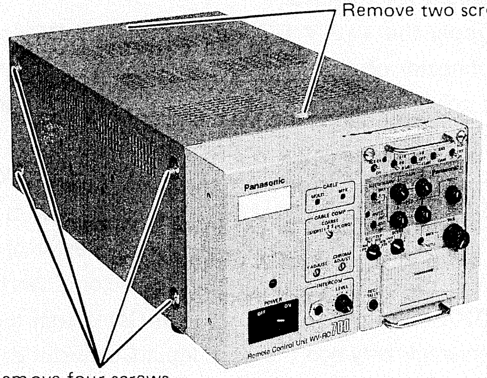
2. Disassembling Procedure for Adjustment

- Referring to the Fig. 2-1 and Fig. 2-2, remove ten screws and remove the Upper Cover.



Remove four screws

Fig. 2-1



Remove two screws

Remove four screws

Fig. 2-2

3. Connection and setting Up for Adjustment

3.1. Connection

The Fig. 3-1 is shown the Connecting Diagram for Adjustment of the Remote Control Unit WV-RC700A.

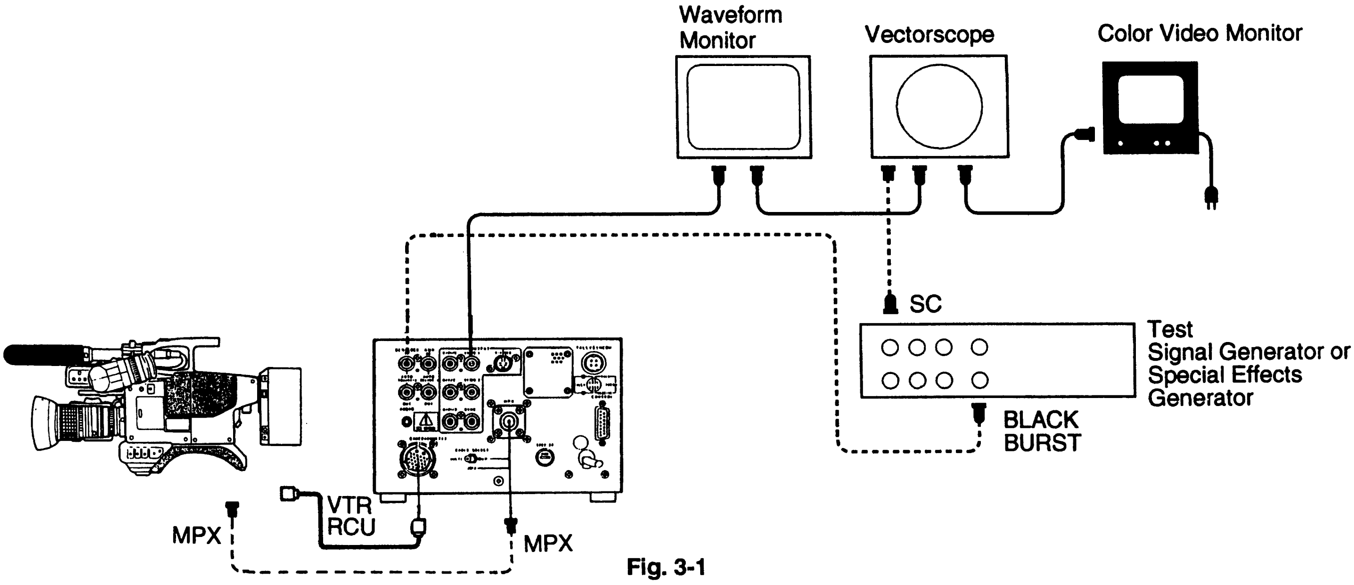


Fig. 3-1

- Set the Camera Adaptor WV-AD700ASE to the Camera WV-F700AE.
- Supply the +12 V DC to the External DC Input Connector of the Camera Adaptor WV-AD700ASE for adjustment during the Multi and/or MPX positions on the Rear Panel of the WV-RC700A.
- Connect the DC Output Connector of the WV-PS700E to the External DC Input Connector of the WV-AD700ASE, the MPX Output Connector of the WV-PS700E to the MPX Input Connector of the WV-AD700ASE, connect the Coaxial Cable with the N Connector between the MPX Input Connector of the WV-PS700E and the MPX Connector on the rear of the WV-RC700A, then set the Cable Selection Switch of the WV-RC700A to the VP position for the adjustment during the VP position.
- Connect the Coaxial Cable between the Video Output Connector on the Rear Panel of the WV-RC700A and the Video Input Connector of the Waveform Monitor.
- Connect the Coaxial Cable between the Video Output Connector of the Waveform Monitor and the Video Input Connector of the Vectorscope.
- Connect the Coaxial Cable between the Video Output Connector of the Vectorscope and the Video Input Connector of the Underscanned Color Video Monitor.
- Terminate the Input Terminal of the Underscanned Color Video Monitor with 75 Ω.
- Connect the Studio Cable WV-CA26U30 between the VTR/RCU Connector on the Rear Panel of the Camera Adaptor WV-AD700ASE and the Multi-Cable Connector on the Rear Panel of the WV-RC700A.
- Connect the MPX Connector of the WV-AD700ASE and the MPX Output Connector of the WV-PS700E using with the Coaxial Cable.
- Connect the Test Signal Generator or Special Effects Generator to the Gen-Lock Input Connector on the Rear Panel of the WV-RC700A using the Coaxial Cable.
- Connect the probe of the Digital Voltmeter or Oscilloscope to the desired test point in each adjustment step.

3.2. Setting Up

- This adjustment should be made after 30 minutes warm up of the Camera and the WV-RC700A.

Position of the Controls and Switches on the Camera as follows:

(Front Side)

- Lens Iris Selection Switch .... NOR
- Filter Selection Knob 1

(Set Up Board)

- Scene File Selection Switch (SW3) ...... ON
- Scene File Selection Switch (SW4) 1
- Detail Level Selection Switch .... OFF
- Detail Frequency Band Selection Switch ... LOW

(Right Side) viewed from front.

- Electronic Shutter Switch .... OFF
- High Gain Selection Switch .... 0 dB
- Color Bar/ ±6 dB/Camera Selection Switch .. BAR

(Right Side of the WV-AD700ASE) viewed from rear

- RCU/VTR Signal Selection Switch .... ENC
- Cable Selection Switch .... VTR/MULTI

4. Adjustment

- Refer to the Location of the Test Points and the Adjusting Controls on Page 20.
- When adjusting either the Power Board, Video Board, Modulator Board and Demodulator Board, use the Extension Board (YWV0EA0177AN).

(1) Vo RCU Adjustment

Test Point: Pin 28 (+ 15.2V) of CN1 Power Board
Pin 39 (+ 110.0V) of CN1 Power Board
Adjust: VR201 (+ 15.2V) Power Supply Board
VR401 (+ 110.0V) Power Supply Board

- Connect the MPX Input Connector of the WV-PS700E and the MPX Connector of the WV-RC700A using the N Coaxial Cable.
- Set the Cable Selection Switch on the Rear Panel of the RC-700A to the VP position.
- Connect the Digital Voltmeter to pin 28 of the Extension Board.
- Adjust VR201 to obtain +15.2 ± 0.1V.
- Connect the Digital Voltmeter to pin 39 of the Extension Board.
- Adjust VR401 to obtain +110.0 $^{+0.2}_{-0}$ V.

■ **Before start to adjust the Power Board, confirm the following points.**

- Connect the Studio Cable (WV-CA26U30) between the VTR/RCU Connector of the WV-AD700ASE and the Multi-Cable Connector on the Rear Panel of the WV-RC700A.
- Set the Cable Selection Switch on the Rear Panel of the RC-700A to the Multi position.
- Supply +12 V DC to the External DC Input Connector of the WV-AD700A.

(2) Reset Phase Adjustment

Test Point: TP4 (RESET PHASE) Power Board
Adjust: VR2 (RESET PHASE) Power Board

- Connect the Oscilloscope to TP4. Trigger the Oscilloscope at H rate.
- Adjust the VR2 so that the phase of the Reset Pulse becomes 4T as shown in the Fig. 4-1.

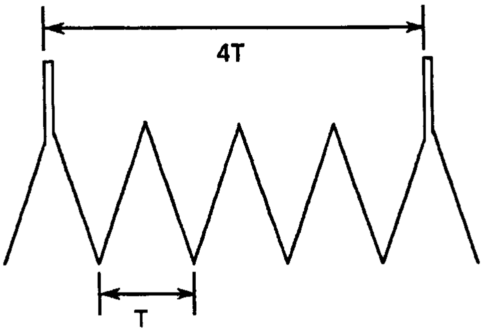


Fig. 4-1

(3) +8.8V Adjustment

Test Point: Pin 1 (+8.8V) of CN1 Power Board
Adjust: VR1 (+8.8V ADJ) Power Board

- Connect the Digital Voltmeter to pin 1 of the Extension Board.
- Adjust VR1 to obtain + 8.8 ± 0.05 V.

(4) +89.0V Adjustment

Test Point: Pin 41 (+89.0V) of CN1 Power Board
Adjust: VR202 (+89.0V) Power Board

- Connect the MPX Input Connector of the WV-PS700E and the MPX Connector of the WV-RC700A using the N Coaxial Cable.
- Set the Cable Selection Switch on the Rear Panel of the RC-700A to the VP position.
- Connect the Digital Voltmeter to pin 1 of the Extension Board.
- Adjust VR202 to obtain + 89.0 ± 0.1 V.

■ **Before start to adjust the Video Board, confirm the following points.**

- Connect the Studio Cable (WV-CA26U30) between the VTR/RCU Connector of the WV-AD700AS and the Multi-Cable Connector on the Rear Panel of the WV-RC700A.

- Supply +12 V DC to the External DC Input Connector of the WV-AD700ASE.

Position of switches on the WV-AD700ASE, WV-RC700A, and WV-CB700AE are as follows:

(WV-AD700ASE)

- Cable Selection Switch .... MULTI

RCU/VTR Signal Selection Switch .... RGB

(WV-RC700A)

- Cable Selection Switch .... MULTI
- Cable Comp Coarse Switch 1

(WV-CB700AE)

- Remote Control Box Operation Switch ... ON
- Color Bar/Camera Selection Switch ...... BAR

(5) Y and Chroma Adjustment

Test Point: **Pin 24 (Y ADJUST) of CN1** **Video Board**
Pin 25 (CHROMA ADJUST) of CN1 **Video Board**
Adjust: **VR1 (LUMINANCE GAIN FINE CONTROL)** **Front Board**
VR2 (CHROMA GAIN FINE CONTROL) **Front Board**

- Connect the Digital Voltmeter to pin 24 of the Extension Board.
- Adjust VR1 on the Front Board to obtain 5.0 ± 0.05 V.
- Connect the Digital Voltmeter to pin 25 of the Extension Board.
- Adjust VR2 on the Front Board to obtain 6.0 ± 0.3 V.

(6) Frequency Response Adjustment

Test Point: **TP3 (VIDEO FREQ RESPONSE)** **Video Board**
TP202 (R FREQ RESPONSE) **Video Board**
TP302 (G FREQ RESPONSE) **Video Board**
TP402 (B FREQ RESPONSE) **Video Board**
Adjust: **VR1 (VIDEO FREQ RESPONSE)** **Video Board**
VR201 (R FREQ RESPONSE) **Video Board**
VR301 (G FREQ RESPONSE) **Video Board**
VR401 (B FREQ RESPONSE) **Video Board**

- Connect the Digital Voltmeter to TP3.
- Adjust VR1 to obtain 6.5 ± 0.05 V.
- Connect the Digital Voltmeter to TP202.
- Adjust VR201 to obtain 6.5 ± 0.05 V.
- Connect the Digital Voltmeter to TP302.
- Adjust VR301 to obtain 6.5 ± 0.05 V.
- Connect the Digital Voltmeter to TP402.
- Adjust VR401 to obtain 6.5 ± 0.05 V.

(7) Video Gain Adjustment

Test Point: **VIDEO 1 Output Connector** **Rear Panel**
Adjust: **VR2 (VIDEO GAIN)** **Video Board**

- Connect the Oscilloscope to the Video 1 Output Connector on the Rear Panel of the WV-RC700A.
- Terminate the input terminal of the Oscilloscope with 75 Ω.
- Adjust VR2 so that the Video signal becomes 700 ± 7 mVp-p as shown in the Fig. 4-2.

  Note: Do not touch the Cable Comp Coarse Switch and the Y Gain Volume on the Front Panel of the WV-RC700A.

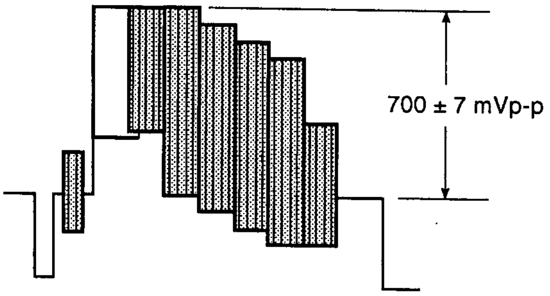


Fig. 4-2

(8) G Gain Adjustment

Test Point: **G/Y/Y Output Connector** **Rear Panel**
Adjust: **VR402 (G GAIN)** **Video Board**

- Set the RCU/VTR Signal Selection Switch of the WV-AD700ASE to the R/G/B position.
- Connect the Oscilloscope to the G/Y/Y Output Connector on the Rear Panel of the WV-RC700A.
- Terminate the input terminal of the Oscilloscope with

75 Ω.

- Adjust VR402 so that the G signal level becomes 700 ± 7 mVp-p as shown in the Fig. 4-3.

Note: Do not touch the Cable Comp Coarse Switch and the Y Gain Volume on the Front Panel of the WV-RC700A.

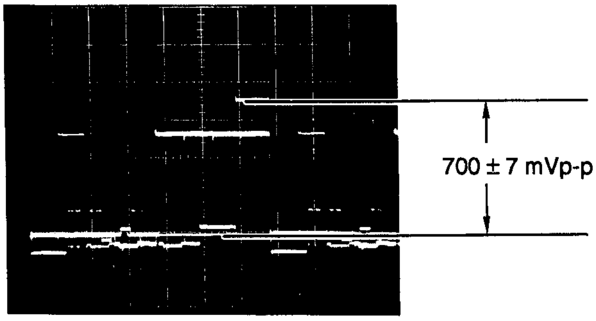


Fig 4-3

(9) R Gain Adjustment

Test Point: **R/PR/C Output Connector** **Rear Panel**
Adjust: **VR202(R GAIN)** **Video Board**

- Confirm that the RCU/VTR Signal Selection Switch of the WV-AD700ASE is the R/G/B/ position.
- Connect the Oscilloscope to the R/PR/C Output Connector on the Rear Panel of the WV-RC700A.
- Terminate the input terminal of the Oscilloscope with 75 Ω.
- Adjust VR202 so that the R signal level becomes 700 ± 7 mV as shown in the Fig. 4-4.

Note: Do not touch the Cable Comp Coarse Switch and the Y Gain Volume on the Front Panel of the WV-RC700A.

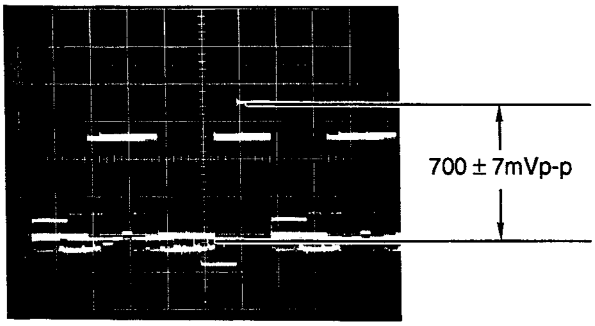


Fig. 4-4

(10) B Gain Adjustment

Test Point: **B/PB/B Output Connector** **Rear Panel**
Adjust: **VR302 (B GAIN)** **Video Board**

- Confirm that the RCU/VTR Signal Selection Switch of the WV-AD700ASE is the R/G/B/position.
- Connect the Oscilloscope to the B/PB/B Output Connector on the Rear Panel of the WV-RC700A.
- Adjust VR302 so that the B signal level becomes 700 ± 7 mV as shown in the Fig. 4-5.

Note: Do not touch the Cable Comp Coarse Switch and the Y Gain Volume on the Front Panel of the WV-RC700A.

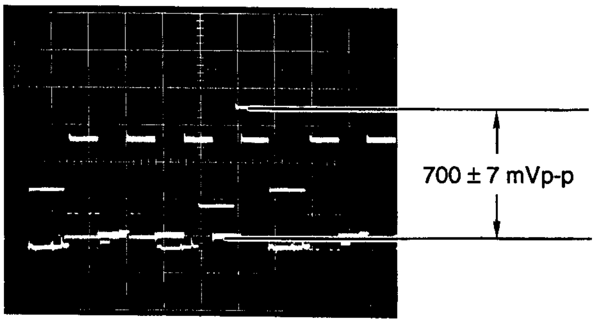


Fig. 4-5

(11) Voltage Confirmation of C Adjust

Test Point: **Video 1 Output Connector** **Rear Panel**
Pin 25 of CN1 **Video Board**
Adjust: **Chroma ADJUST** **Front Panel**

- Connect the Digital Voltmeter to pin 25 of the Extension Board.
- Observing at the Video Output 1 Connector on the Rear Panel of the WV-RC700A by the Vectorscope, adjust Chroma Adjustment Volume on the Front Panel of the WV-RC700A so that the R vector positions at center of the R area.
- Confirm the voltage at pin 25 should be within 6.0 ± 1.5 V.

(12) Gen-Lock Sync Level and Burst Level Adjustment

Test Point: **Pin 30 (MPX GEN-LOCK) of CN1** **Video Board**

Adjust: **VR601 (BURST LEVEL)** **Video Board**

VR602 (SYNC LEVEL) **Video Board**

- Supply the Black Burst Signal to the Gen-Lock Input Connector on the Rear Panel of WV-RC700A.
- Connect the Oscilloscope to the pin 30 of the Extension Board.
- Adjust VR602 so that the Sync level becomes 1.0 ± 0.1 Vp-p as shown in the Fig. 4-6.
- Adjust VR601 so that the Burst level becomes 1.0 ± 0.1 Vp-p as shown in the Fig. 4-6.

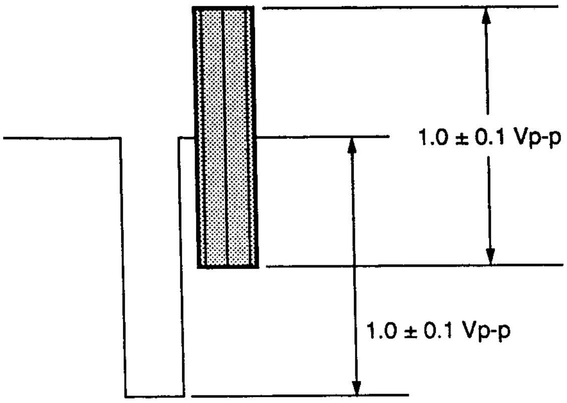


Fig. 4-6

(13) AUX Level Adjustment

Test Point: **TP501 (AUX)** **Video Board**

Adjust: **VR501 (AUX LEVEL)** **Video Board**

- Supply the Stair Step Signal to Auxiliary Input Connector on the Rear Panel of WV-RC700A from the Test Signal Generator.
- Connect the Oscilloscope to TP501.
- Adjust VR501 so that the Sync signal level becomes 0.7 ± 0.02 Vp-p as shown in the Fig. 4-7.
- Confirm that the Stair Step signal level should be within 1.75 ± 0.2 Vp-p as shown in the Fig. 4-7.

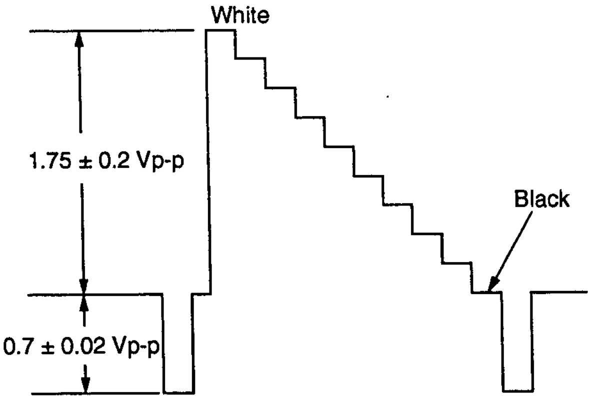


Fig. 4-7

■ **Before start to adjust the Demodulator Board, confirm the following points.**

- Disconnect the Studio Cable (WV-CA26U30) between the VTR/RCU Connector on the Rear Panel of the WV-AD700ASE and the Multi-Cable Connector on the Rear Panel of the WV-RC700A.
- Connect the MPX Input Connector of the WV-AD700ASE and the MPX Connector of the WV-RC700A using the Coaxial Cable.
- Supply +12 V DC to the External DC Input Connector of the WV-AD700ASE.

Position of switches on the WV-AD700ASE, WV-RC700A and WV-CB700AE are as follows:

(WV-AD700ASE)

- Cable Selection Switch .... MPX

(WV-RC700A)

- Cable Selection Switch .... MPX
- Cable Comp Coarse Switch 1

(WV-CB700AE)

- Remote Control Box Operation Switch ...... ON
- Color Bar/Camera Selection Switch .... BAR

(14) Video Gain Adjustment

Test Point: **TP7 (VIDEO 2)** **Demodulator Board**

Adjust: **VR1 (VIDEO GAIN)** **Demodulator Board**

- Connect the Oscilloscope to TP7.
- Trigger the Oscilloscope at H rate.
- Adjust VR1 so that the Video signal level becomes 1.0 ± 0.05 Vp-p as shown in the Fig. 4-8.

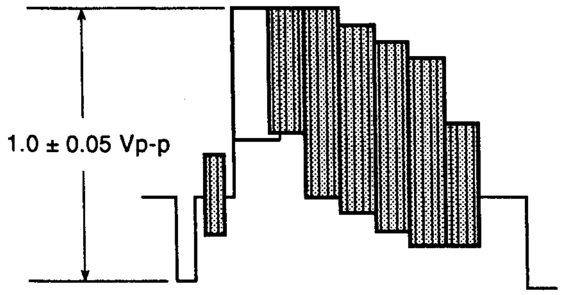
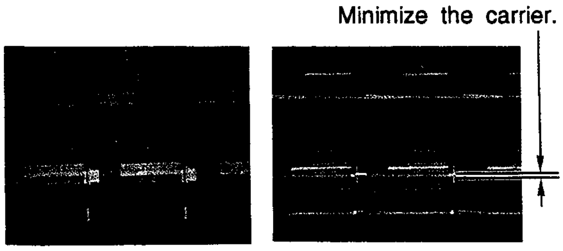


Fig. 4-8

(15) Clamp Pulse Phase Adjustment

Test Point: **TP7 (VIDEO 2)**
Demodulator Board
Adjust: **VR2 (CLAMP PULSE PHASE)**
Demodulator Board

- Connect the Oscilloscope to TP7.
- Trigger the Oscilloscope at V rate.
- Turn VR2 fully clockwise and turn it back slowly and stop it when minimize the distortion of the Vertical Blanking Pulse as shown in the Fig. 4-9.
- Confirm the Video signal becomes 1.0 ± 0.05 Vp-p. If not, readjust the step (14) Video Gain Adjustment again.



NO GOOD GOOD

Fig. 4-9

(16) AGC Pulse Phase Coarse Adjustment

Test Point: **TP13 (AGC PULSE) Modulator Board**
Pin 28 (VD) of CN1 Modulator Board
Adjust: **VR6 (AGC PULSE PHASE)**
Modulator Board

- Connect two probes of the Oscilloscope to TP13 on the Modulator Board and the pin 28 of CN1 on the Extension Board.
- Set the Oscilloscope at H rate, and dual display.
- Expand the AGC Pulse period on the Oscilloscope.
- Adjust VR6 so that the AGC Pulse width becomes 100 ± 10 μsec from falling edge of the VD Pulse as shown in the Fig. 4-10.

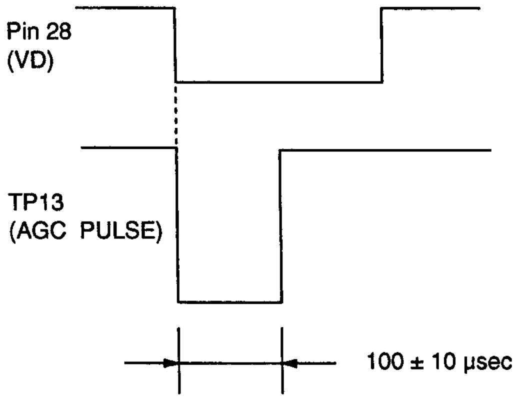


Fig. 4-10

(17) AGC Pulse Adjustment

Test Point: **Pin 28 (VD) of CN1**
Extension Board
TP3 (AGC PULSE)
Demodulator Board
Adjust: **VR3 (AGC PULSE PHASE)**
Demodulator Board
VR4 (AGC PULSE WIDTH)
Demodulator Board

- Connect two probes of the Oscilloscope to TP3 on the Demodulator Board and the pin 28 of CN1 on the Extension Board.
- Set the Oscilloscope dual display and expand the AGC Pulse period on the Oscilloscope.
- Adjust VR3 so that the leading edge of the VD at the pin 28 of CN1 on the Extension Board lags 220 ± 10 μsec the leading edge of the AGC Pulse at TP3 as shown in the Fig. 4-11.
- Adjust VR4 so that the AGC Pulse width becomes 60 ± 5 μsec as shown in the Fig. 4-11.

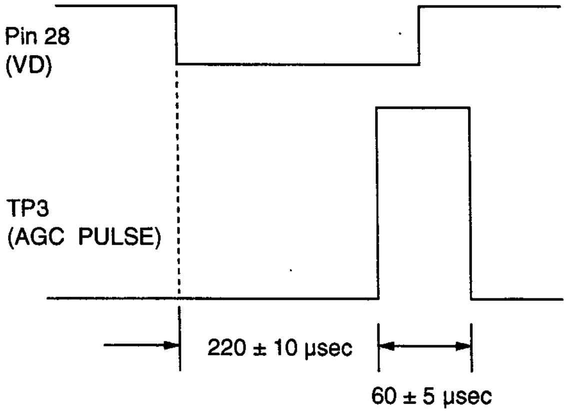


Fig. 4-11

(18) AGC Cancel Pulse Adjustment

Test Point: **TP4 (AGC CANCEL) Demodulator Board**

Adjust: **VR5 (AGC CANCEL) Demodulator Board**

- Connect the Oscilloscope to TP4.
- Adjust VR5 so that the AGC Cancel Pulse width becomes 340 ± 10 μsec as shown in the Fig. 4-12.

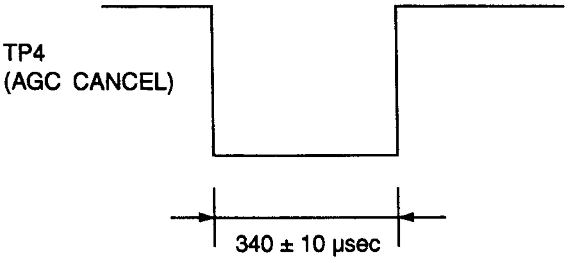


Fig. 4-12

(19) Data Cancel Pulse Width Adjustment

Test Point: **TP5 (DATA CANCEL) Demodulator Board**

Adjust: **VR6 (DATA CANCEL) Demodulator Board**

- Connect the Oscilloscope to TP5.
- Adjust VR6 so that the Data Cancel Pulse width becomes 100 ± 5 μsec as shown in the Fig. 4-13.

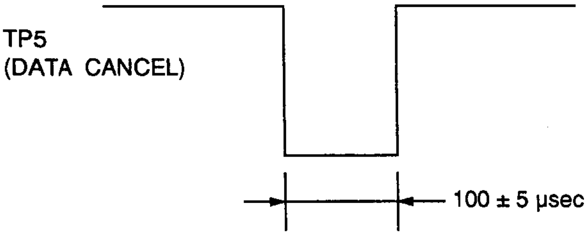


Fig. 4-13

(20) Command Level Adjustment

Test Point: **TP6 (GEN-LOCK) Modulator Board**

Adjust: **VR5 (COMMAND LEVEL) Modulator Board**

VR8 (COMMAND MOD-2) Modulator Board

- Set the SW3 to OFF position and SW4 to ON position on the Modulator Board.
- Connect the Oscilloscope to TP6.
- Trigger the Oscilloscope at V rate.
- Set VR5 to its mechanical center position and VR7 to fully clockwise.
- Adjust VR8 so that the carrier level becomes minimum as shown in the Fig. 4-14.
- Adjust VR5 so that the Command signal level becomes 1.5 ± 0.2 Vp-p as shown in the Fig. 4-14.

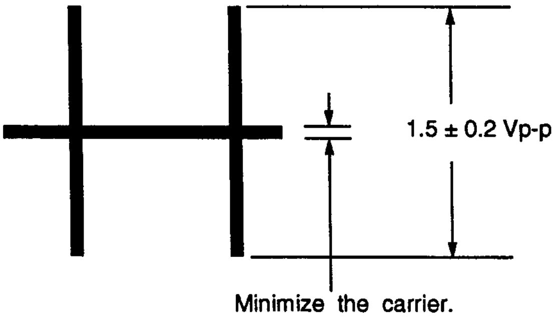


Fig. 4-14.

(21) Command AGC Level Adjustment

Test Point: **TP1 (COMMAND AGC) Demodulator Board**

Adjust: **VR7 (COMMAND AGC) Demodulator Board**

- Connect the Oscilloscope to TP1.
- Trigger the Oscilloscope at V rate.
- Adjust VR7 so that the Command AGC level becomes 0.45 ± 0.05 Vp-p as shown in the Fig. 4-15.

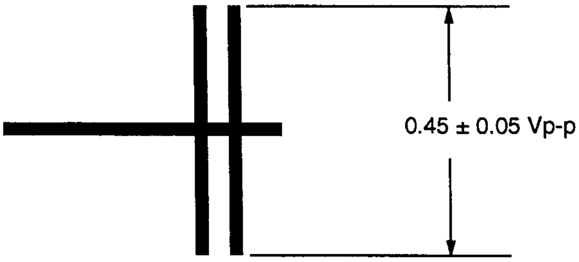


Fig. 4-15

(22) Command Pulse Adjustment

Test Point: **TP2 (COMMAND PULSE) Demodulator Board**

Adjust: **CT1 (COMMAND CARRIER) Demodulator Board**

- Connect the Oscilloscope to TP2.

Trigger the Oscilloscope at V rate.
Adjust CT1 so that the carrier on the Command Pulse becomes minimum as shown in the Fig. 4-16.

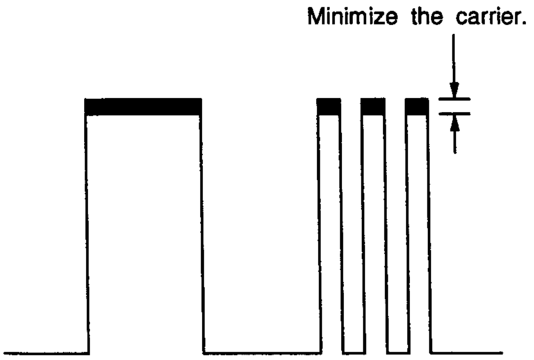


Fig. 4-16

■ **Before start to adjust the Modulator Board, confirm the following points.**

- Disconnect the Studio Cable (WV-CA26U30) between the VTR/RCU Connector on the Rear Panel of the WV-AD700ASE and the Multi-Cable Connector on the Rear Panel of the WV-RC700A.
- Connect the MPX Input Connector of the WV-AD700AS and the MPX Connector of the WV-RC700A using the Coaxial Cable.
- Supply +12 V DC to the External DC Input Connector of the WV-AD700ASE.
- Supply either the Black Burst signal to the Gen-Lock Input Connector on the Rear Panel of the WV-RC700A from the Test Signal Generator or Special Effects Generator.

Position of switches on the WV-AD700ASE, WV-RC700A and WV-CB700AE are as follows:

(WV-AD700ASE)

- Cable Selection Switch .... MPX

(WV-RC700A)

- Cable Selection Switch .... MPX
- Cable Comp Coarse Switch 1

(WV-CB700AE)

- Remote Control Box Operation Switch ...... ON
- Color Bar/Camera Selection Switch .... BAR

(23) AGC Pulse Phase Adjustment

Test Point: **TP13 (AGC PULSE)** **Modulator Board**
Pin 28 (VD) of CN1 **Modulator Board**
Adjust: **VR6 (AGC PULSE PHASE)** **Modulator Board**

- Connect the Oscilloscope to TP13 on the Modulator Board and the pin 28 of CN1 on the Extension Board.
- Set the Oscilloscope at H rate and dual display.
- Expand the AGC Pulse period on the Oscilloscope.
- Adjust VR6 so that the AGC Pulse width becomes 100 ± 5 μsec from falling edge of the VD Pulse as shown in the Fig. 4-17.

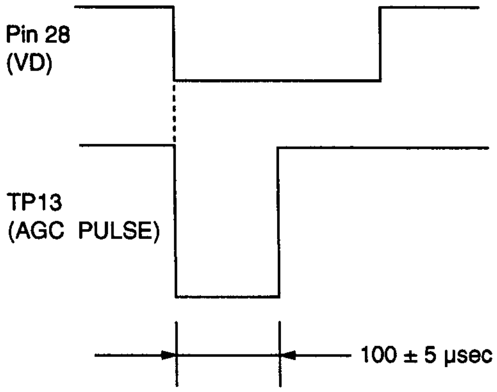
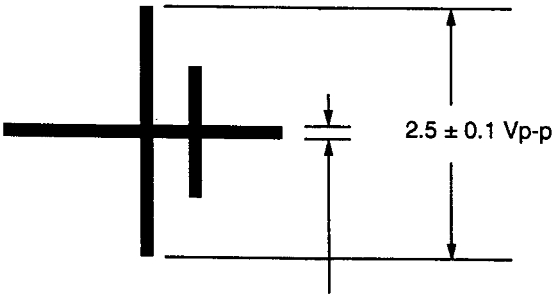


Fig. 4-17

(24) Gen-Lock Modulation Adjustment

Test Point: **TP6 (GEN-LOCK)** **Modulator Board**
Adjust: **VR2 (G/L MOD-1)** **Modulator Board**
VR3 (G/L MOD-2) **Modulator Board**
VR4 (G/L LEVEL) **Modulator Board**

- Set SW1,SW3, and SW4 on the Modulator Board are as follows:
  SW1 and SW4: OFF
  SW3: ON
- Connect the Oscilloscope to TP6.
- Trigger the Oscilloscope at H rate.
- Set VR4 to its mechanical center position and VR2 to fully clockwise.
- Adjust VR3 so that the carrier level becomes minimum as shown in the Fig. 4-18.
- Adjust VR4 so that the Gen-Lock signal level becomes 2.5 ± 0.1 Vp-p as shown in the Fig. 4-18.



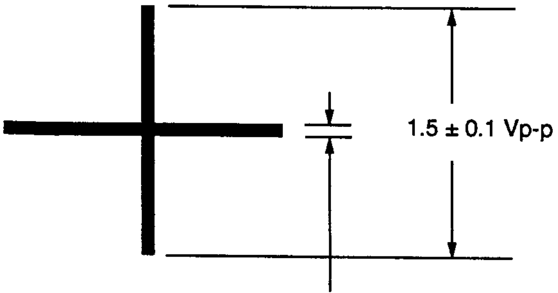
Minimize the carrier.

Fig. 4-18

(25) Command Modulation Adjustment

Test Point: TP6 (GEN LOCK) Modulator Board
Adjust: VR7 (COMMAND MOD-1) Modulator Board
VR8 (COMMAND MOD-2) Modulator Board
VR5 (COMMAND LEVEL) Modulator Board

- Set SW1, SW3, and SW4 on the Modulator Board are as follows:
  SW1 and SW3: OFF
  SW4: ON
- Connect the Oscilloscope to TP6.
- Trigger the Oscilloscope at H rate.
- Set VR5 to its mechanical center position and VR7 to fully clockwise.
- Adjust VR8 so that the carrier on the Command signal becomes minimum.
- Adjust VR5 so that the Command signal level becomes 1.5 ± 0.1 Vp-p as shown in the Fig. 4-19.



Minimize the carrier.

Fig. 4-19

(26) 11.7MHz Adjustment

Test Point: TP2 (11.7MHz) Modulator Board
Adjust: L1 (11.7MHz) Modulator Board

- Set SW1 and SW2 on the Audio Board of the WV-AD700ASE are as follows:
  SW1: Intercom
  SW2: ON
- Set SW1, SW2, SW3 and SW4 on the Modulator Board are as follows:
  SW1: ON
  SW2: Intercom
  SW3 and SW4: OFF
- Connect the Oscilloscope to TP2.
- Adjust L1 so that the carrier level becomes maximum.
- Connect the Frequency Counter to TP2.
- Adjust L1 to obtain 11.700 ± 0.001 MHz.

(27) 5.0V Adjustment

Test Point: TP3 (5.0V) Modulator Board
Adjust: L3 (5.0V) Modulator Board

- Set SW1 and SW2 on the Audio Board of the WV-AD700ASE are as follows:
  SW1: Intercom
  SW2: ON
  Set SW1, SW2, SW3 and SW4 on the Modulator Board are as follows:
  SW1: ON
  SW2: Intercom
  SW3 and SW4: OFF
  Connect the Digital Voltmeter to TP3.
  Adjust L3 to obtain 5.0 ± 0.1 V.
  Note: Disconnect the Headset from the WV-AD700ASE.

(28) Carrier Level Adjustment

Test Point: TP6 (GEN-LOCK) Modulator Board
Adjust: VR1 (0.5V) Modulator Board

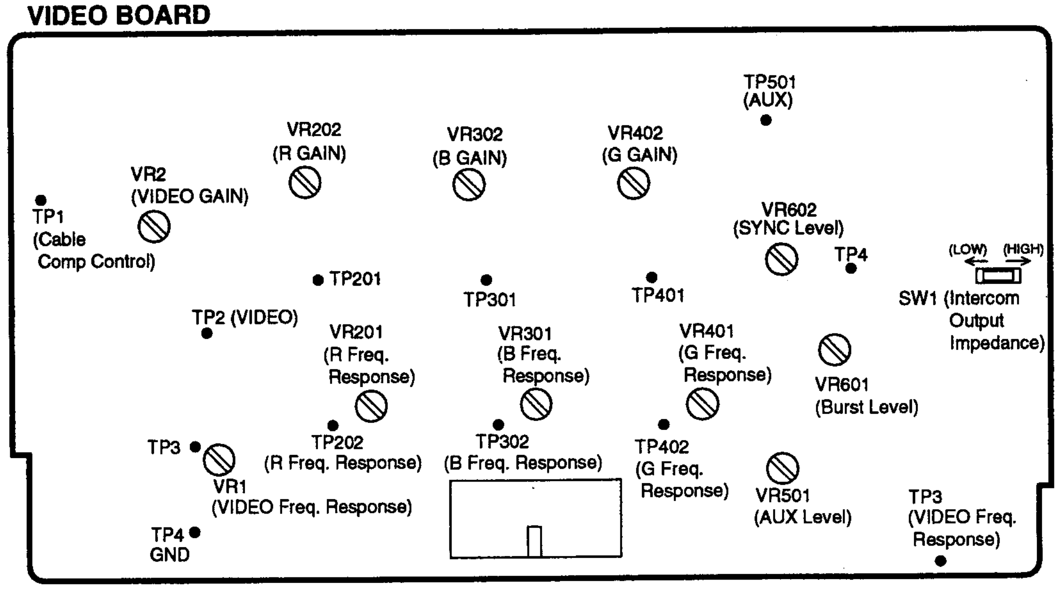
- Set SW1 and SW2 on the Audio Board of the WV-AD700ASE are as follows:
  SW1: Intercom
  SW2: ON
- Set SW1, SW2, SW3 and SW4 on the Modulator Board are as follows:
  SW1: ON
  SW2: Intercom
  SW3 and SW4: OFF
- Connect the Oscilloscope to TP6.
- Adjust VR1 so that the Carrier level becomes 0.5 ± 0.05 Vp-p.

■ **After completing of the adjustment, all switches SW1, SW2, SW3, and SW4 on the Modulator Board as follows:**

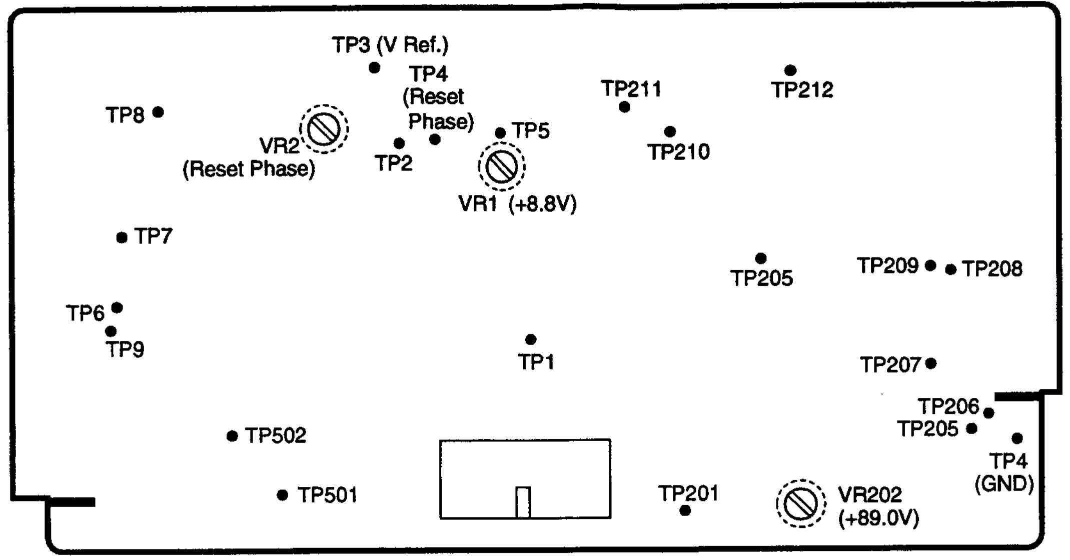
SW1: ON SW2: INTERCOM
SW3: ON SW4: ON

LOCATION OF TEST POINTS AND ADJUSTING CONTROLS

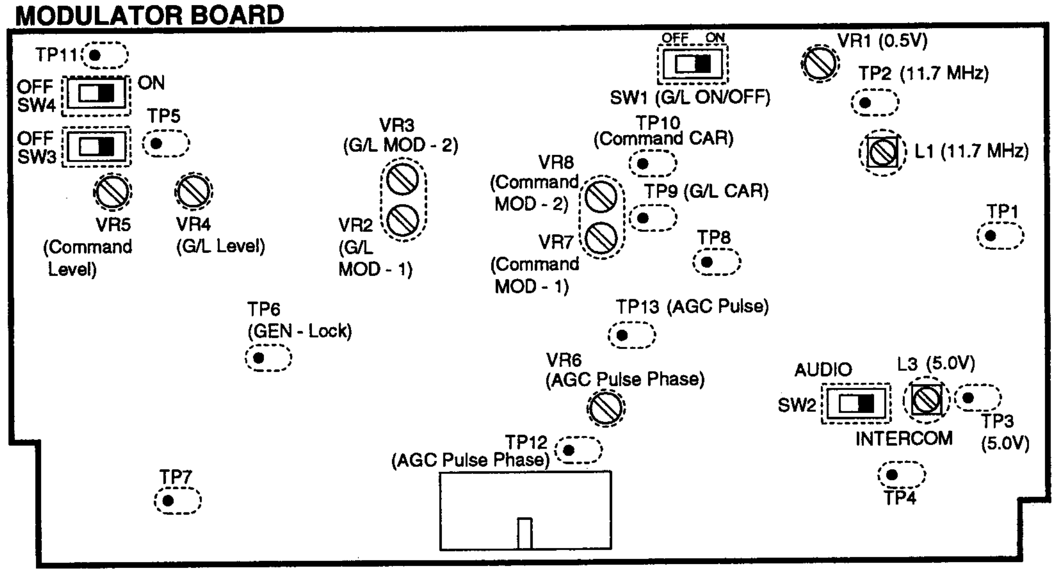
VIDEO BOARD


TP501
(AUX)
VR202
(R GAIN)
VR302
(B GAIN)
VR402
(G GAIN)
VR2
(VIDEO GAIN)
TP1
(Cable
Comp Control)
VR602
(SYNC Level)
TP4
(LOW) (HIGH)
TP201
TP301
TP401
SW1 (Intercom
Output
Impedance)
TP2 (VIDEO)
VR201
(R Freq.
Response)
VR301
(B Freq.
Response)
VR401
(G Freq.
Response)
VR601
(Burst Level)
TP202
(R Freq. Response)
TP302
(B Freq. Response)
TP402
(G Freq.
Response)
TP3
VR1
(VIDEO Freq. Response)
VR501
(AUX Level)
TP3
(VIDEO Freq.
Response)
TP4
GND

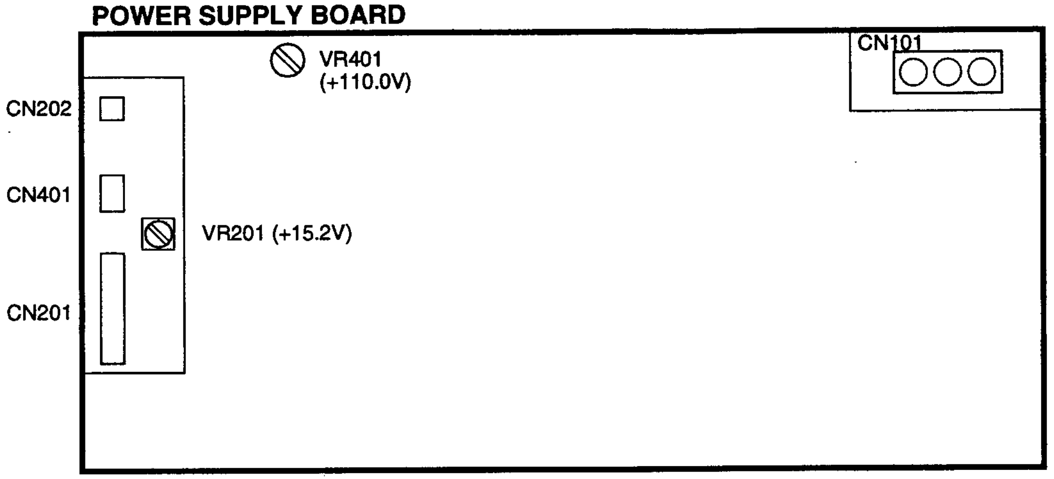
POWER BOARD


TP3 (V Ref.)
TP4
(Reset
Phase)
TP211
TP212
TP8
VR2
(Reset Phase)
TP2
TP5
TP210
VR1 (+8.8V)
TP7
TP205
TP209
TP208
TP6
TP9
TP1
TP207
TP206
TP205
TP502
TP4
(GND)
TP501
TP201
VR202
(+89.0V)

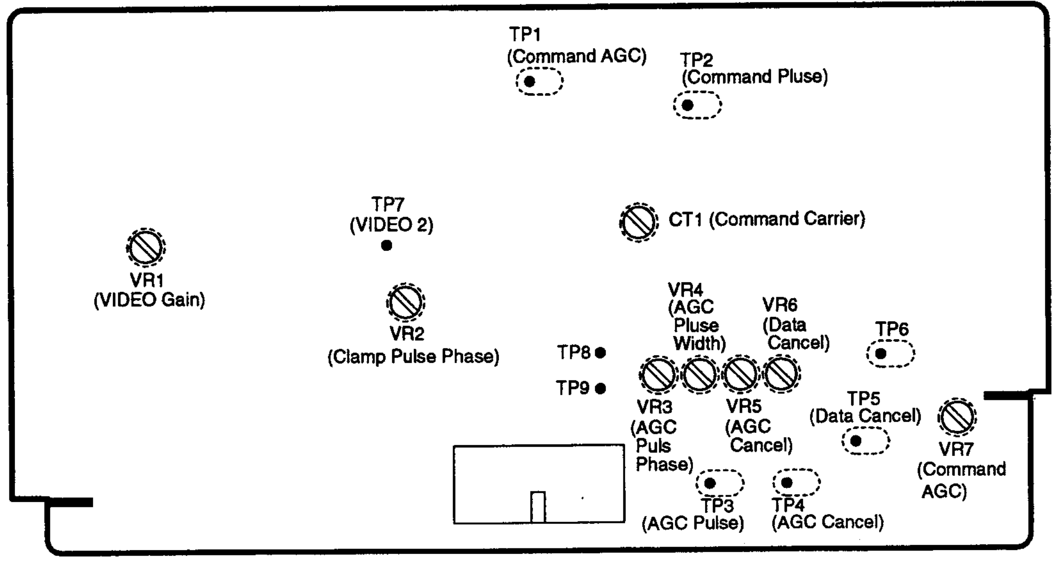
MODULATOR BOARD


TP11
OFF
SW4
ON
TP5
OFF
SW3
OFF ON
SW1 (G/L ON/OFF)
VR1 (0.5V)
TP2 (11.7 MHz)
L1 (11.7 MHz)
VR3
(G/L MOD - 2)
TP10
(Command CAR)
VR8
(Command
MOD - 2)
TP9 (G/L CAR)
VR5
(Command
Level)
VR4
(G/L Level)
VR2
(G/L
MOD - 1)
VR7
(Command
MOD - 1)
TP8
TP1
TP13 (AGC Pulse)
TP6
(GEN - Lock)
VR6
(AGC Pulse Phase)
AUDIO
SW2
INTERCOM
L3 (5.0V)
TP3
(5.0V)
TP12
(AGC Pulse Phase)
TP7
TP4

POWER SUPPLY BOARD

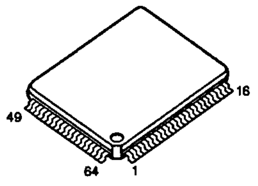

VR401
(+110.0V)
CN101
CN202
CN401
VR201 (+15.2V)
CN201

DEMODULATOR BOARD

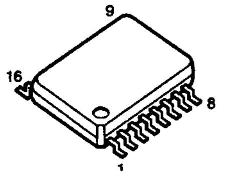

TP1
(Command AGC)
TP2
(Command Pluse)
TP7
(VIDEO 2)
CT1 (Command Carrier)
VR1
(VIDEO Gain)
VR2
(Clamp Pulse Phase)
VR4
(AGC
Pluse
Width)
VR6
(Data
Cancel)
TP6
TP8
TP9
VR3
(AGC
Puls
Phase)
VR5
(AGC
Cancel)
TP5
(Data Cancel)
VR7
(Command
AGC)
TP3
(AGC Pulse)
TP4
(AGC Cancel)

APPEARANCE OF IC, TRANSISTOR AND DIODE

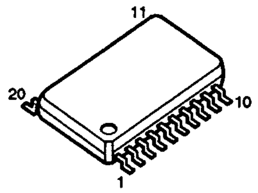
YWMN18888CUL



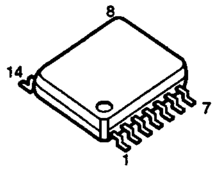
MN4050BS
MN4051BS
MN4052BS
MN4053BS
MN4520BS
YWUPD4538BG
YWUPD4528G
YWUPD4053G
MN4538BS
MN74HC221S
YWTL1451CNS



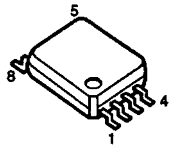
YWMC145407F



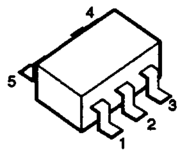
MN74HC125S
MN74HC08S
MN74HC32S
MN74HC74S
YWUPD74HC164
YWUPD4001BG
YWUPD4081BG
YWUP4066BG
NJM1496M
YWCX20095A
YWUPD4071BG
YWUPC4064G2
MN74HC393S
MN74HC132S
MN4011BS



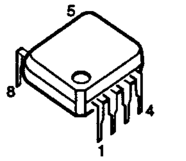
NJM386M
NJM2901M
NJM2902M
NJM2903M
NJM2904M
NJM4556M
NJM592M8
TL092CPS
TLC272CPS
YWLM1881M
YWM51957BFP
NJM555M
YWNJM2243M



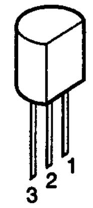
YWTC7S08F
YWTC4S66FR
YWTC4S69F
YWTC4S71F
YWTC4S81FR



YWSN16913P
AQW214

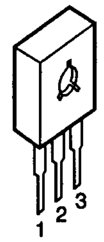


AN1431T
NJM78L05A



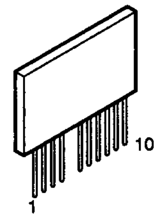
1: Input
2: Ground
3: Output

AN78N0

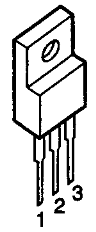


1: Input
2: Ground
3: Output

EH-16
EH-7

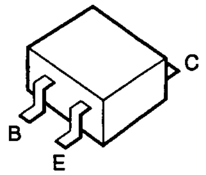


YWNJM78M05A
YWNJM7824A

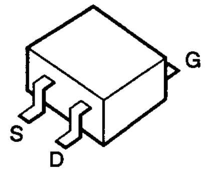


1: Input
2: Ground
3: Output

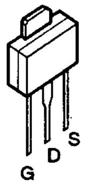
2SA1022-C
2SB709-RS
2SD814-QRS
NTM3906-T2B
YWNTM3904
2SC3757-Q
2SB1218-QRS
2SB792A-RS
2SB1219-QRS
2SC2404-CD
2SD1819-QRS
2SD601-RS
2SD709-QR



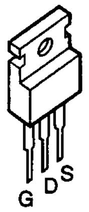
2SK198-Q



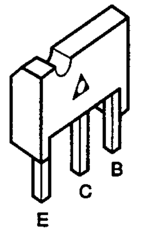
2SJ132



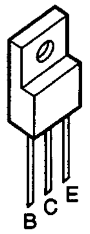
2SJ122



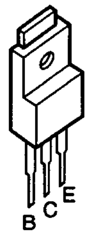
2SB793-RS
2SB819



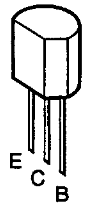
2SD1913



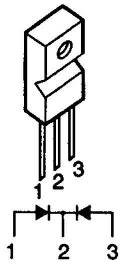
2SC3694L



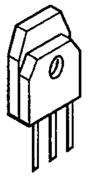
2SB560E



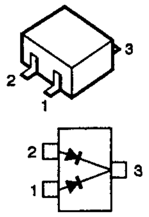
YWFML-33S



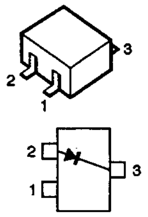
2SK956
2SK1082



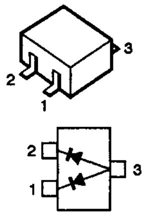
MA151WK



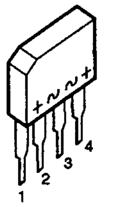
MA151K



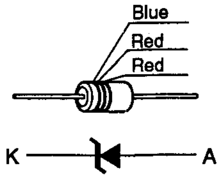
MA151WA



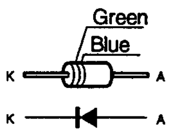
MYWD35BA60



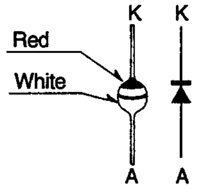
MA1062-M


Blue
Red
Red
K
A

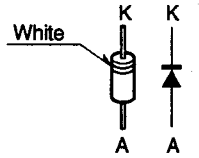
1SS97-2


Green
Blue
K
A
K
A

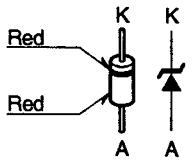
VO3G


Red
White
K
K
A
A

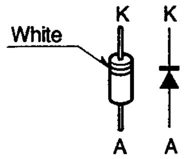
MA165



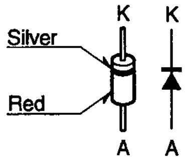
YWRD62EB
YWRD24EB1
YWRDE03B4
YWRD303B3


Red
Red
K
K
A
A

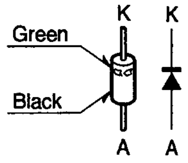
YWERB38-05
YWER38-05
ERD38-06



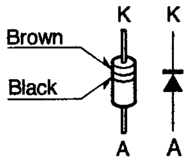
RGP10K


Silver
Red
K
K
A
A

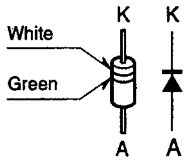
YWER848-05
YWER48-05


Green
Black
K
K
A
A

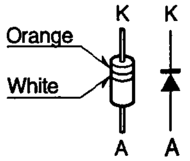
YWRD10FB


Brown
Black
K
K
A
A

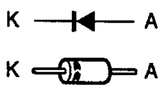
MA182


White
Green
K
K
A
A

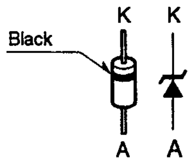
MA1130


Orange
White
K
K
A
A

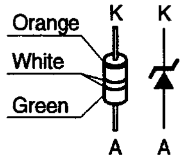
YWEA81-004



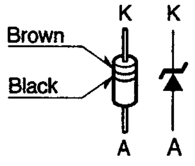
YWHZ2BLL



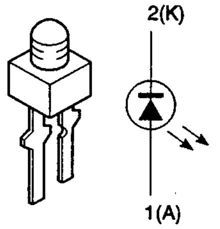
MA1039-M


Orange
White
Green
K
K
A
A

MA1100-H


Brown
Black
K
K
A
A

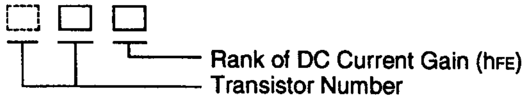
LN338GHP
LN238RHP



CHIP COMPONENTS

1. Chip Transistor

The transistor number is indicated on the top surface of the chip transistor using two alphabet letters or one numerical number and two alphabet letters.



Transistor Number

(Chip Transistor)

Letter	Transistor No.	Letter	Transistor No.
A	2SB709	X	2SD602A
B	2SB709A	Y	2SD601
C	2SB710	Z	2SD601A
D	2SB710A	1A	2SB799
E	2SA1022	1B	2SB814
F	2SA1034	1C	2SB902
H	2SA1035	1F	2SK321
I	2SB792	1K	2SK316
K	2SC2778	1L	2SK247
P	2SD814	1M	2SJ84
Q	2SD813	1N	2SK199
R	2SC2480	1O	2SK198
S	2SC2405	1T	2SC3077
T	2SC2406	1X	2SC2845
U	2SC2404	1Z	2SD1030
V	2SC2295	2B	2SK374
W	2SD602	2C	2SK116

(Small Chip Transistor)

Letter	Transistor No.
A	2SB1218
U	2SC3931
W	2SD1820
Y	2SD1819
E3	2SA1226
OS	2SB1219
UC	2SA1532
YU	2SC3938

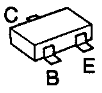
(Pair Transistor)

Letter	Transistor No.
5C	XN4601
5N	XN6501
5O	XN6401

Example: WQ → 2SD602-Q
YQ → 2SD601-Q
1BS → 2SB814-S

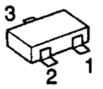
Appearance and Symbols

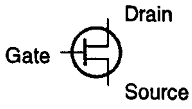
Transistor



C: Collector
B: Bass
E: Emitter

FET

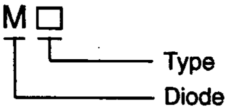




	1	2	3
Except 2SK199	Drain	Source	Gate
2SK199	Gate	Drain	Source

2. Chip Diode

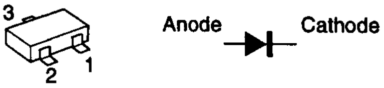
The diode number is indicated on the top surface of the chip diode using two alphabet letters.



Diode Number

Letter	Diode No.	Letter	Diode No.
MA	MA151A	MI	MA152K
MB	MA152A	MK	MA28W-B
MC	MA153	ML	MA28T-A
MD	MA28-A	MN	MA151WA
ME	MA28-B	MO	MA152WA
MF	MA28W-A	MT	MA151WK
MH	MA151K	MU	MA152WK

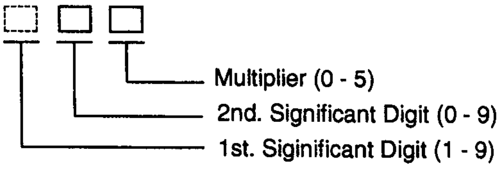
Appearance and Symbol



	1	2	3
MA28/MA28W/MA28T	-	Anode	Cathode
MA151K/MA152K	-	Anode	Cathode
MA151A/MA152A	-	Cathode	Anode
MA151WK/MA152WK	Anode	Anode	Cathode
MA151WA/MA152WA	Cathode	Cathode	Anode
MA153	Cathode	Anode	Cathode

3. Chip Resistor

The resistor value is indicated on the bottom surface of the chip resistor using three digit numbers.


Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Siginificant Digit (1 - 9)

Example:

330 → $33 \times 10^0 = 33\,\Omega$
561 → $56 \times 10^1 = 560\,\Omega$
123 → $12 \times 10^3 = 12\,k\Omega$

Note: Zero ohm resistor (jumper chip) is colored red or green.

4. Chip Capacitor

The capacitive value of replacement chip capacitors is indicated on the bottom surface. original parts do not have value indication.

If the capacitive value is less than 100 pF, the value will be indicated by one or two digit number expressing the capacity directly in pF.

Example:

0.5 → 0.5 pF   2.5 → 2.5 pF
.75 → 0.75 pF   33 → 33 pF
1 → 1 pF   82 → 82 pF

If the capacitive value is 100 pF or greater, the value will be indicated by an alpha-numeric code. The letter precedes the number and expresses a numerical value to be multiplied by the number which follows.

☐ ☐
Multiplier (1 - 5)
Numerical Value

Numerical Value

Letter	Value	Letter	Value
A	10	N	33
B	11	P	36
C	12	Q	39
D	13	R	43
E	15	S	47
F	16	T	51
G	18	U	56
H	20	V	62
J	22	W	68
K	24	X	75
L	27	Y	82
M	30	Z	91

* Letters I and O are not used.

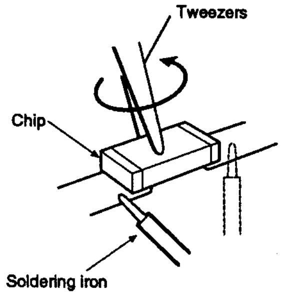
Example: A1 → 10×10^1 = 100 pF
N2 → 33×10^2 = 3300 pF
S3 → 47×10^3 = 47000 pF

5. Precautions in replacing the chip component

1. Make sure that the unit is turned OFF when replacing the chip.
2. Use tweezers to prevent any damage to the chip surface.
3. Do not re-use the chips after removal.
4. Do not rub the electrode of chips.
5. Do not subject the chips to excessive stress.
6. It is recommended that a pencil-type soldering iron to be used.
7. The solder whose diameter is less than 0.5 mm is recommended.
8. Do not heat the chip beyond 3 second.
9. Maintain temperature control under 260°C (500°F) when soldering.

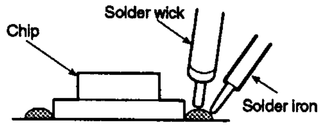
5-1 Removal (Transistor, Diode, Resistor and Capacitor)

1. Add the solder to both ends of the chip (three leads for chip transistor).
2. While attaching the sokdering iron to both ends of the chip (three leads for chip transistor) as shown below, remove the chip by turning with tweezers.
   Note: Be careful not to damage other chips.

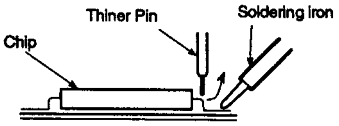


5-2 Removal (IC)

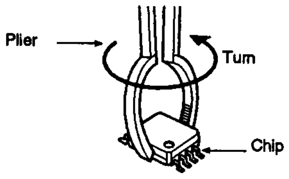
1. Add the solder wick and soldering iron to each lead of the IC and remove solder.



2. Add the soldering iron to each lead of the IC and left each lead of the IC using thiner pin.

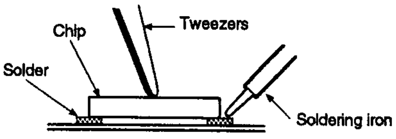


3. Remove IC turning it with plier.

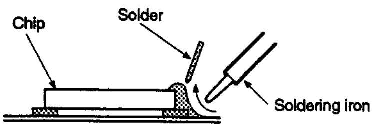


5-3 Mounting

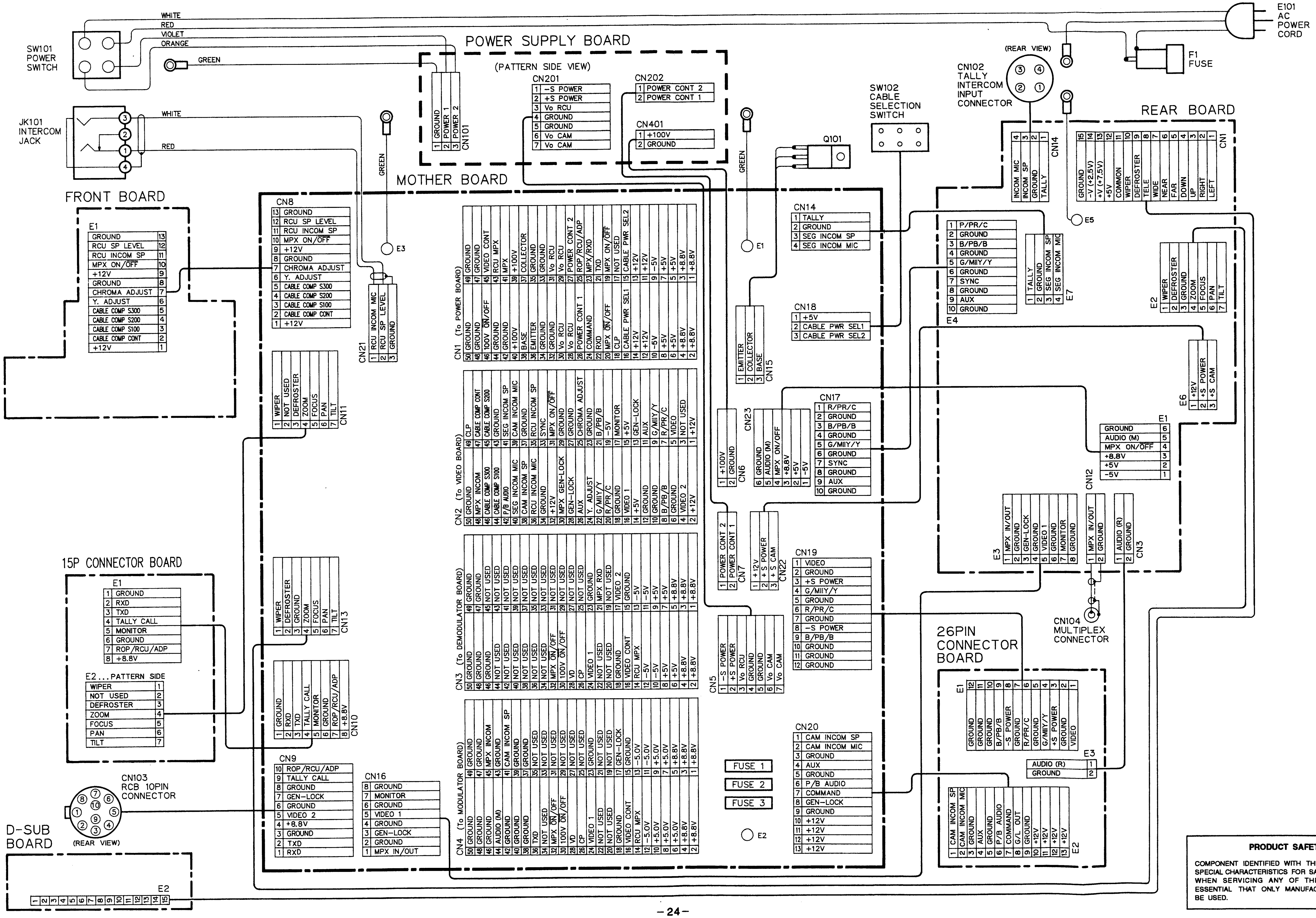
1. Place the solder thinly on the chip mounting foil.
2. Solder the chip temporarily while holding the chip with the tweezers.



3. Solder both ends of chip (three leads for chip transistor).



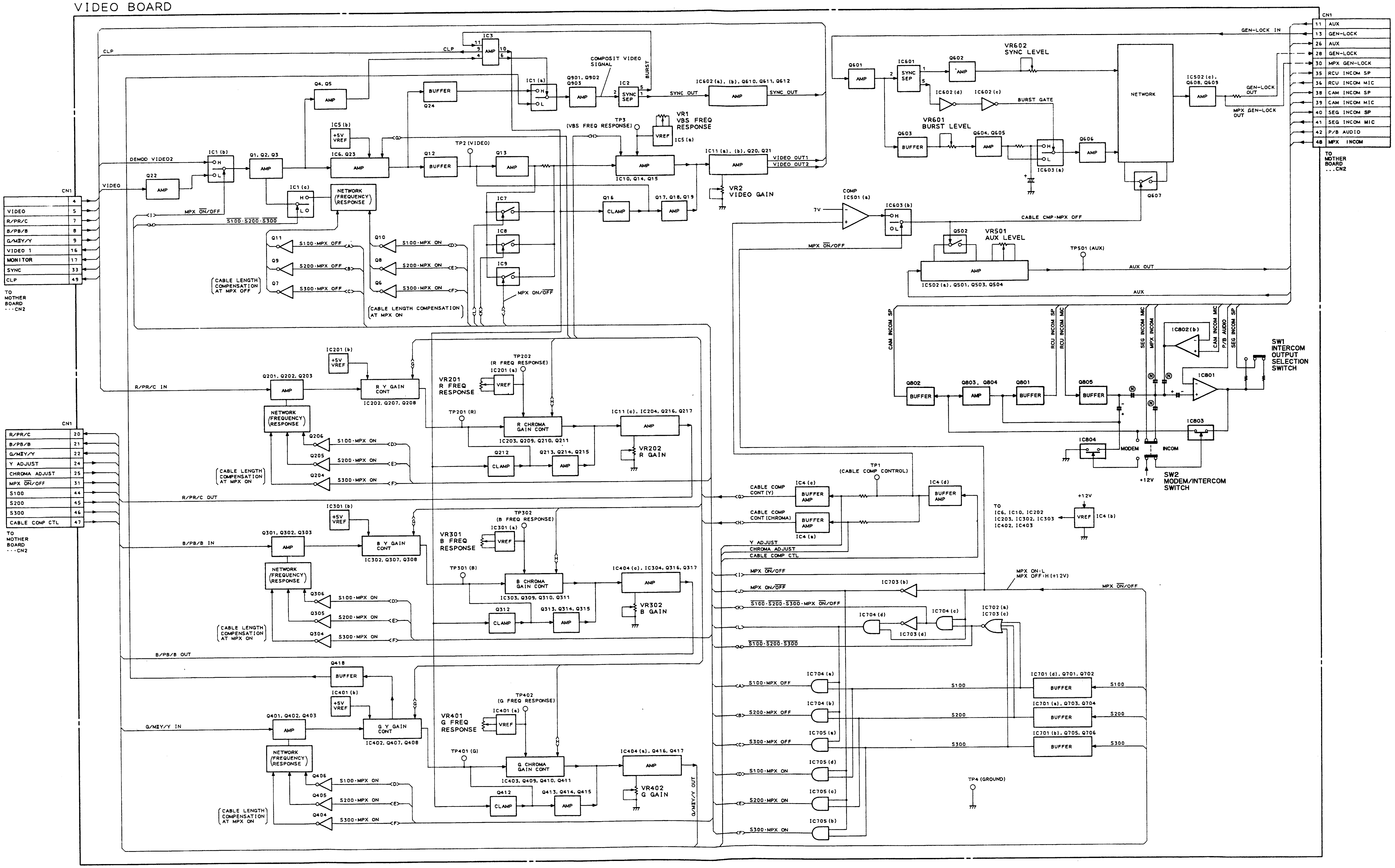
WIRING DIAGRAM OF REMOTE CONTROL UNIT WV-RC700


SW101 POWER SWITCH
WHITE
RED
VIOLET
ORANGE
GREEN
JK101 INTERCOM JACK
WHITE
RED
FRONT BOARD
E1
GROUND 13
RCU SP LEVEL 12
RCU INCOM SP 11
MPX ON/OFF 10
+12V 9
GROUND 8
CHROMA ADJUST 7
Y. ADJUST 6
CABLE COMP S300 5
CABLE COMP S200 4
CABLE COMP S100 3
CABLE COMP CONT 2
+12V 1
POWER SUPPLY BOARD
(PATTERN SIDE VIEW)
CN101
1 GROUND
2 POWER 1
3 POWER 2
CN201
1 −S POWER
2 +S POWER
3 Vo RCU
4 GROUND
5 GROUND
6 Vo CAM
7 Vo CAM
CN202
1 POWER CONT 2
2 POWER CONT 1
CN401
1 +100V
2 GROUND
GREEN
MOTHER BOARD
CN8
13 GROUND
12 RCU SP LEVEL
11 RCU INCOM SP
10 MPX ON/OFF
9 +12V
8 GROUND
7 CHROMA ADJUST
6 Y. ADJUST
5 CABLE COMP S300
4 CABLE COMP S200
3 CABLE COMP S100
2 CABLE COMP CONT
1 +12V
CN21
1 RCU INCOM MIC
2 RCU SP LEVEL
3 GROUND
E3
CN11
1 WIPER
2 NOT USED
3 DEFROSTER
4 ZOOM
5 FOCUS
6 PAN
7 TILT
CN13
1 WIPER
2 DEFROSTER
3 GROUND
4 ZOOM
5 FOCUS
6 PAN
7 TILT
CN10
1 GROUND
2 RXD
3 TXD
4 TALLY CALL
5 MONITOR
6 GROUND
7 ROP/RCU/ADP
8 +8.8V
CN9
10 ROP/RCU/ADP
9 TALLY CALL
8 GROUND
7 GEN-LOCK
6 GROUND
5 VIDEO 2
4 +8.8V
3 GROUND
2 TXD
1 RXD
CN16
8 GROUND
7 MONITOR
6 GROUND
5 VIDEO 1
4 GROUND
3 GEN-LOCK
2 GROUND
1 MPX IN/OUT
CN1 (To POWER BOARD)
CN2 (To VIDEO BOARD)
CN3 (To DEMODULATOR BOARD)
CN4 (To MODULATOR BOARD)
CN14
1 TALLY
2 GROUND
3 SEG INCOM SP
4 SEG INCOM MIC
CN18
1 +5V
2 CABLE PWR SEL1
3 CABLE PWR SEL2
E1
CN15
1 EMITTER
2 COLLECTOR
3 BASE
CN17
1 R/PR/C
2 GROUND
3 B/PB/B
4 GROUND
5 G/MIIY/Y
6 GROUND
7 SYNC
8 GROUND
9 AUX
10 GROUND
CN23
6 GROUND
5 AUDIO (M)
4 MPX ON/OFF
3 +8.8V
2 +5V
1 −5V
CN6
1 +100V
2 GROUND
CN7
1 POWER CONT 2
2 POWER CONT 1
CN22
1 +12V
2 + S POWER
3 + S CAM
CN19
1 VIDEO
2 GROUND
3 +S POWER
4 G/MIIY/Y
5 GROUND
6 R/PR/C
7 GROUND
8 −S POWER
9 B/PB/B
10 GROUND
11 GROUND
12 GROUND
CN5
1 −S POWER
2 +S POWER
3 Vo RCU
4 GROUND
5 GROUND
6 Vo CAM
7 Vo CAM
CN20
1 CAM INCOM SP
2 CAM INCOM MIC
3 GROUND
4 AUX
5 GROUND
6 P/B AUDIO
7 COMMAND
8 GEN-LOCK
9 GROUND
10 +12V
11 +12V
12 +12V
13 +12V
FUSE 1
FUSE 2
FUSE 3
E2
Q101
SW102 CABLE SELECTION SWITCH
CN102 TALLY INTERCOM INPUT CONNECTOR
(REAR VIEW)
E101 AC POWER CORD
F1 FUSE
REAR BOARD
CN14
1 TALLY
2 GROUND
3 INCOM SP
4 INCOM MIC
CN1
1 LEFT
2 RIGHT
3 UP
4 DOWN
5 FAR
6 NEAR
7 WIDE
8 TELE
9 DEFROSTER
10 WIPER
11 COMMON
12 +5V
13 +V (+7.5V)
14 −V (+2.5V)
15 GROUND
E5
E4
1 P/PR/C
2 GROUND
3 B/PB/B
4 GROUND
5 G/MIIY/Y
6 GROUND
7 SYNC
8 GROUND
9 AUX
10 GROUND
E7
1 TALLY
2 GROUND
3 SEG INCOM SP
4 SEG INCOM MIC
E2
1 WIPER
2 DEFROSTER
3 GROUND
4 ZOOM
5 FOCUS
6 PAN
7 TILT
E6
1 +12V
2 +S POWER
3 +S CAM
E1
GROUND 6
AUDIO (M) 5
MPX ON/OFF 4
+8.8V 3
+5V 2
−5V 1
CN12
E3
1 MPX IN/OUT
2 GROUND
3 GEN-LOCK
4 GROUND
5 VIDEO 1
6 GROUND
7 MONITOR
8 GROUND
CN3
1 MPX IN/OUT
2 GROUND
1 AUDIO (R)
2 GROUND
CN104 MULTIPLEX CONNECTOR
26PIN CONNECTOR BOARD
E1
12 GROUND
11 GROUND
10 GROUND
9 B/PB/B
8 −S POWER
7 GROUND
6 R/PR/C
5 GROUND
4 G/MIIY/Y
3 +S POWER
2 GROUND
1 VIDEO
E3
AUDIO (R) 1
GROUND 2
E2
1 CAM INCOM SP
2 CAM INCOM MIC
3 GROUND
4 AUX
5 GROUND
6 P/B AUDIO
7 COMMAND
8 G/L OUT
9 GROUND
10 +12V
11 +12V
12 +12V
13 +12V
15P CONNECTOR BOARD
E1
1 GROUND
2 RXD
3 TXD
4 TALLY CALL
5 MONITOR
6 GROUND
7 ROP/RCU/ADP
8 +8.8V
E2...PATTERN SIDE
WIPER 1
NOT USED 2
DEFROSTER 3
ZOOM 4
FOCUS 5
PAN 6
TILT 7
CN103 RCB 10PIN CONNECTOR
(REAR VIEW)
D-SUB BOARD
E2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

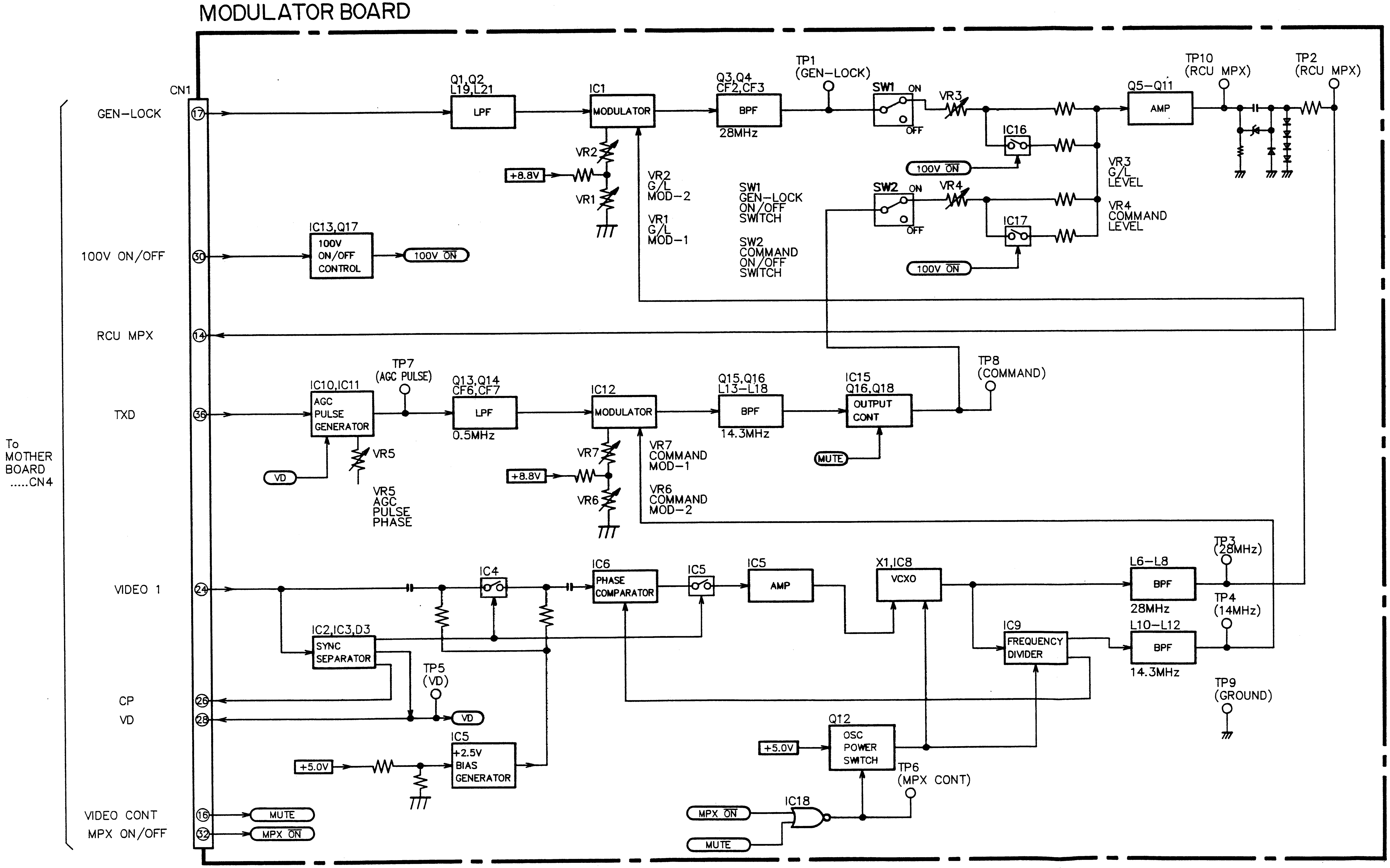
PRODUCT SAFETY NOTICE

COMPONENT IDENTIFIED WITH THE "⚠" MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN SERVICING ANY OF THESE COMPONENTS, IT IS ESSENTIAL THAT ONLY MANUFACTURE'S SPECIFIED PARTS BE USED.

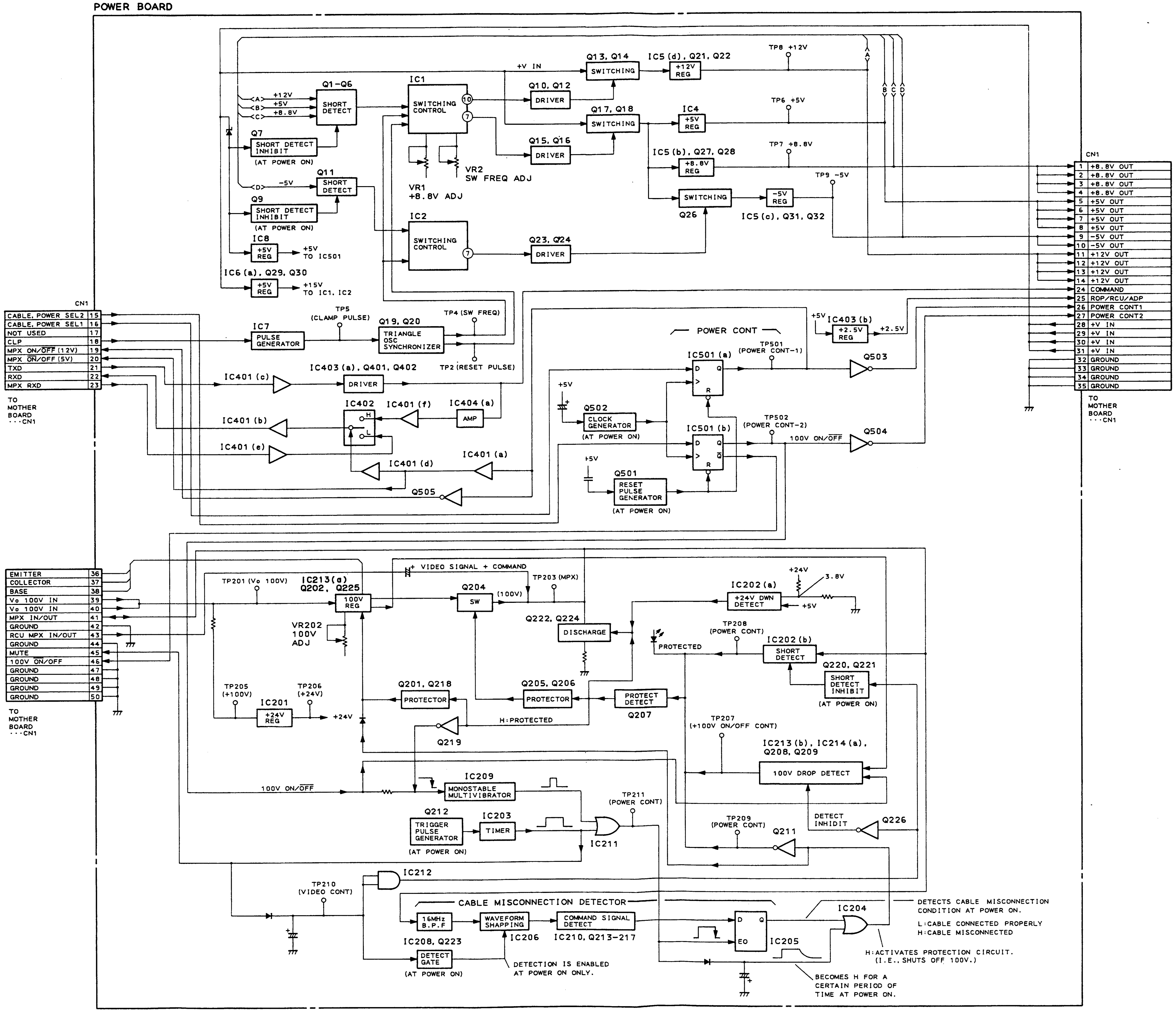
BLOCK DIAGRAM OF VIDEO BOARD


VIDEO BOARD
CN1
VIDEO
R/PR/C
B/PB/B
G/MEY/Y
VIDEO 1
MONITOR
SYNC
CLP
TO MOTHER BOARD ···CN2
CLP
DEMOD VIDEO2
VIDEO
MPX ON/OFF
S100·S200·S300
IC3
AMP
IC1 (a)
IC1 (b)
IC1 (c)
Q22
AMP
Q1, Q2, Q3
AMP
Q4, Q5
AMP
BUFFER
Q24
IC5 (b)
+5V VREF
IC6, Q23
AMP
NETWORK (FREQUENCY RESPONSE)
Q12
BUFFER
TP2 (VIDEO)
Q13
AMP
COMPOSIT VIDEO SIGNAL
Q901, Q902, Q903
AMP
IC2
SYNC SEP
BURST
SYNC OUT
IC602 (a), (b), Q610, Q611, Q612
AMP
SYNC OUT
TP3 (VBS FREQ RESPONSE)
VR1 VBS FREQ RESPONSE
VREF
IC5 (a)
IC10, Q14, Q15
AMP
IC11 (a), (b), Q20, Q21
AMP
VIDEO OUT1
VIDEO OUT2
VR2 VIDEO GAIN
Q16
CLAMP
Q17, Q18, Q19
AMP
IC7
IC8
IC9
MPX ON/OFF
Q11 S100·MPX OFF
Q9 S200·MPX OFF
Q7 S300·MPX OFF
Q10 S100·MPX ON
Q8 S200·MPX ON
Q6 S300·MPX ON
(CABLE LENGTH COMPENSATION AT MPX OFF)
(CABLE LENGTH COMPENSATION AT MPX ON)
Q601
AMP
IC601
SYNC SEP
Q602
AMP
VR602 SYNC LEVEL
IC602 (d)
IC602 (c)
BURST GATE
Q603
BUFFER
VR601 BURST LEVEL
Q604, Q605
AMP
IC603 (a)
Q606
AMP
NETWORK
Q607
IC502 (c), Q608, Q609
AMP
GEN-LOCK OUT
MPX GEN-LOCK OUT
GEN-LOCK IN
CN1
11 AUX
13 GEN-LOCK
26 AUX
28 GEN-LOCK
30 MPX GEN-LOCK
35 RCU INCOM SP
36 RCU INCOM MIC
38 CAM INCOM SP
39 CAM INCOM MIC
40 SEG INCOM SP
41 SEG INCOM MIC
42 P/B AUDIO
48 MPX INCOM
TO MOTHER BOARD ···CN2
COMP IC501 (a)
7V
IC603 (b)
CABLE CMP·MPX OFF
MPX ON/OFF
Q502
VR501 AUX LEVEL
TP501 (AUX)
AMP
AUX OUT
IC502 (a), Q501, Q503, Q504
AUX
CAM INCOM SP
RCU INCOM SP
RCU INCOM MIC
SEG INCOM MIC
MPX INCOM
CAM INCOM MIC
P/B AUDIO
SEG INCOM SP
IC802 (b)
SW1 INTERCOM OUTPUT SELECTION SWITCH
Q802
BUFFER
Q803, Q804
AMP
Q801
BUFFER
Q805
BUFFER
IC801
IC803
IC804
MODEM
INCOM
+12V
SW2 MODEM/INTERCOM SWITCH
CN1
R/PR/C 20
B/PB/B 21
G/MEY/Y 22
Y ADJUST 24
CHROMA ADJUST 25
MPX ON/OFF 31
S100 44
S200 45
S300 46
CABLE COMP CTL 47
TO MOTHER BOARD ···CN2
R/PR/C IN
IC201 (b)
+5V VREF
Q201, Q202, Q203
AMP
R Y GAIN CONT
IC202, Q207, Q208
NETWORK (FREQUENCY RESPONSE)
Q206 S100·MPX ON
Q205 S200·MPX ON
Q204 S300·MPX ON
(CABLE LENGTH COMPENSATION AT MPX ON)
VR201 R FREQ RESPONSE
TP202 (R FREQ RESPONSE)
IC201 (a)
VREF
TP201 (R)
R CHROMA GAIN CONT
IC203, Q209, Q210, Q211
Q212
CLAMP
Q213, Q214, Q215
AMP
IC11 (c), IC204, Q216, Q217
AMP
VR202 R GAIN
R/PR/C OUT
B/PB/B IN
IC301 (b)
+5V VREF
Q301, Q302, Q303
AMP
B Y GAIN CONT
IC302, Q307, Q308
NETWORK (FREQUENCY RESPONSE)
Q306 S100·MPX ON
Q305 S200·MPX ON
Q304 S300·MPX ON
(CABLE LENGTH COMPENSATION AT MPX ON)
VR301 B FREQ RESPONSE
TP302 (B FREQ RESPONSE)
IC301 (a)
VREF
TP301 (B)
B CHROMA GAIN CONT
IC303, Q309, Q310, Q311
Q312
CLAMP
Q313, Q314, Q315
AMP
IC404 (c), IC304, Q316, Q317
AMP
VR302 B GAIN
B/PB/B OUT
Q418
BUFFER
IC401 (b)
+5V VREF
G/MEY/Y IN
Q401, Q402, Q403
AMP
G Y GAIN CONT
IC402, Q407, Q408
NETWORK (FREQUENCY RESPONSE)
Q406 S100·MPX ON
Q405 S200·MPX ON
Q404 S300·MPX ON
(CABLE LENGTH COMPENSATION AT MPX ON)
VR401 G FREQ RESPONSE
TP402 (G FREQ RESPONSE)
IC401 (a)
VREF
TP401 (G)
G CHROMA GAIN CONT
IC403, Q409, Q410, Q411
Q412
CLAMP
Q413, Q414, Q415
AMP
IC404 (a), Q416, Q417
AMP
VR402 G GAIN
G/MEY/Y OUT
CABLE COMP CONT (Y)
CABLE COMP CONT (CHROMA)
IC4 (c)
BUFFER AMP
IC4 (a)
BUFFER AMP
TP1 (CABLE COMP CONTROL)
IC4 (d)
BUFFER AMP
+12V
VREF
IC4 (b)
TO IC6, IC10, IC202 IC203, IC302, IC303 IC402, IC403
Y ADJUST
CHROMA ADJUST
CABLE COMP CTL
MPX ON/OFF
MPX ON/OFF
IC703 (b)
MPX ON:L MPX OFF:H (+12V)
MPX ON/OFF
S100·S200·S300·MPX ON/OFF
IC704 (d)
IC704 (c)
IC703 (d)
IC702 (a) IC703 (c)
S100·S200·S300
IC704 (a) S100·MPX OFF
IC704 (b) S200·MPX OFF
IC705 (a) S300·MPX OFF
IC705 (d) S100·MPX ON
IC705 (c) S200·MPX ON
IC705 (b) S300·MPX ON
S100
S200
S300
IC701 (d), Q701, Q702
BUFFER
IC701 (a), Q703, Q704
BUFFER
IC701 (b), Q705, Q706
BUFFER
TP4 (GROUND)

BLOCK DIAGRAM OF MODULATOR BOARD


MODULATOR BOARD
CN1
GEN-LOCK
100V ON/OFF
RCU MPX
TXD
VIDEO 1
CP
VD
VIDEO CONT
MPX ON/OFF
To MOTHER BOARD CN4
⑰
㉚
⑭
㊱
㉔
㉖
㉘
⑯
㉜
Q1,Q2 L19,L21
LPF
IC1
MODULATOR
Q3,Q4 CF2,CF3
BPF
28MHz
TP1 (GEN-LOCK)
SW1 ON OFF
VR3
Q5-Q11
AMP
TP10 (RCU MPX)
TP2 (RCU MPX)
IC16
100V ON
VR2
+8.8V
VR1
VR2 G/L MOD-2
VR1 G/L MOD-1
SW1 GEN-LOCK ON/OFF SWITCH
SW2 COMMAND ON/OFF SWITCH
SW2 ON OFF
VR4
IC17
100V ON
VR3 G/L LEVEL
VR4 COMMAND LEVEL
IC13,Q17
100V ON/OFF CONTROL
100V ON
TP7 (AGC PULSE)
IC10,IC11
AGC PULSE GENERATOR
VR5
VD
VR5 AGC PULSE PHASE
Q13,Q14 CF6,CF7
LPF
0.5MHz
IC12
MODULATOR
VR7
+8.8V
VR6
VR7 COMMAND MOD-1
VR6 COMMAND MOD-2
Q15,Q16 L13-L18
BPF
14.3MHz
IC15 Q16,Q18
OUTPUT CONT
MUTE
TP8 (COMMAND)
IC4
IC6
PHASE COMPARATOR
IC5
IC5
AMP
X1,IC8
VCXO
L6-L8
BPF
28MHz
TP3 (28MHz)
TP4 (14MHz)
IC9
FREQUENCY DIVIDER
L10-L12
BPF
14.3MHz
TP9 (GROUND)
IC2,IC3,D3
SYNC SEPARATOR
TP5 (VD)
VD
IC5
+2.5V BIAS GENERATOR
+5.0V
Q12
OSC POWER SWITCH
+5.0V
TP6 (MPX CONT)
IC18
MPX ON
MUTE
MUTE
MPX ON

BLOCK DIAGRAM OF POWER BOARD


POWER BOARD
Q1–Q6
SHORT DETECT
<A> +12V
<B> +5V
<C> +8.8V
Q7
SHORT DETECT INHIBIT
(AT POWER ON)
Q11
<D> −5V
SHORT DETECT
Q9
SHORT DETECT INHIBIT
(AT POWER ON)
IC8
+5V REG
+5V TO IC501
IC6 (a), Q29, Q30
+5V REG
+15V TO IC1, IC2
IC1
SWITCHING CONTROL
10
7
VR1 +8.8V ADJ
VR2 SW FREQ ADJ
IC2
SWITCHING CONTROL
7
+V IN
Q13, Q14
SWITCHING
IC5 (d), Q21, Q22
+12V REG
TP8 +12V
Q10, Q12
DRIVER
Q17, Q18
SWITCHING
IC4
+5V REG
TP6 +5V
Q15, Q16
DRIVER
IC5 (b), Q27, Q28
+8.8V REG
TP7 +8.8V
TP9 −5V
SWITCHING
Q26
−5V REG
IC5 (c), Q31, Q32
Q23, Q24
DRIVER
A
B
C
D
CN1
1 +8.8V OUT
2 +8.8V OUT
3 +8.8V OUT
4 +8.8V OUT
5 +5V OUT
6 +5V OUT
7 +5V OUT
8 +5V OUT
9 −5V OUT
10 −5V OUT
11 +12V OUT
12 +12V OUT
13 +12V OUT
14 +12V OUT
24 COMMAND
25 ROP/RCU/ADP
26 POWER CONT1
27 POWER CONT2
28 +V IN
29 +V IN
30 +V IN
31 +V IN
32 GROUND
33 GROUND
34 GROUND
35 GROUND
TO MOTHER BOARD ···CN1
CN1
CABLE, POWER SEL2 15
CABLE, POWER SEL1 16
NOT USED 17
CLP 18
MPX ON/OFF (12V) 19
MPX ON/OFF (5V) 20
TXD 21
RXD 22
MPX RXD 23
TO MOTHER BOARD ···CN1
IC7
PULSE GENERATOR
TP5 (CLAMP PULSE)
Q19, Q20
TRIANGLE OSC SYNCHRONIZER
TP4 (SW FREQ)
TP2 (RESET PULSE)
IC401 (c)
IC403 (a), Q401, Q402
DRIVER
IC402
H
L
IC401 (f)
IC404 (a)
AMP
IC401 (b)
IC401 (e)
IC401 (d)
IC401 (a)
Q505
POWER CONT
+5V
Q502
CLOCK GENERATOR
(AT POWER ON)
IC501 (a)
D Q
R
TP501 (POWER CONT−1)
+5V IC403 (b)
+2.5V REG
+2.5V
Q503
IC501 (b)
D Q
Q̄
R
TP502 (POWER CONT−2)
100V ON/OFF
Q504
+5V
Q501
RESET PULSE GENERATOR
(AT POWER ON)
EMITTER 36
COLLECTOR 37
BASE 38
Vo 100V IN 39
Vo 100V IN 40
MPX IN/OUT 41
GROUND 42
RCU MPX IN/OUT 43
GROUND 44
MUTE 45
100V ON/OFF 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
TO MOTHER BOARD ···CN1
TP201 (Vo 100V)
IC213 (a) Q202, Q225
100V REG
VR202 100V ADJ
VIDEO SIGNAL + COMMAND
Q204
SW
(100V)
TP203 (MPX)
Q222, Q224
DISCHARGE
TP205 (+100V)
IC201
+24V REG
TP206 (+24V)
+24V
Q201, Q218
PROTECTOR
Q205, Q206
PROTECTOR
PROTECT DETECT
Q207
H:PROTECTED
Q219
IC202 (a)
+24V DWN DETECT
+24V
3.8V
+5V
PROTECTED
TP208 (POWER CONT)
IC202 (b)
SHORT DETECT
Q220, Q221
SHORT DETECT INHIBIT
(AT POWER ON)
TP207 (+100V ON/OFF CONT)
IC213 (b), IC214 (a), Q208, Q209
100V DROP DETECT
100V ON/OFF
IC209
MONOSTABLE MULTIVIBRATOR
TP211 (POWER CONT)
Q212
TRIGGER PULSE GENERATOR
(AT POWER ON)
IC203
TIMER
IC211
TP209 (POWER CONT)
Q211
DETECT INHIDIT
Q226
IC212
TP210 (VIDEO CONT)
CABLE MISCONNECTION DETECTOR
16MHz B.P.F
WAVEFORM SHAPPING
COMMAND SIGNAL DETECT
IC208, Q223
IC206
IC210, Q213–217
DETECT GATE
(AT POWER ON)
D Q
EO
IC205
IC204

DETECTION IS ENABLED AT POWER ON ONLY.

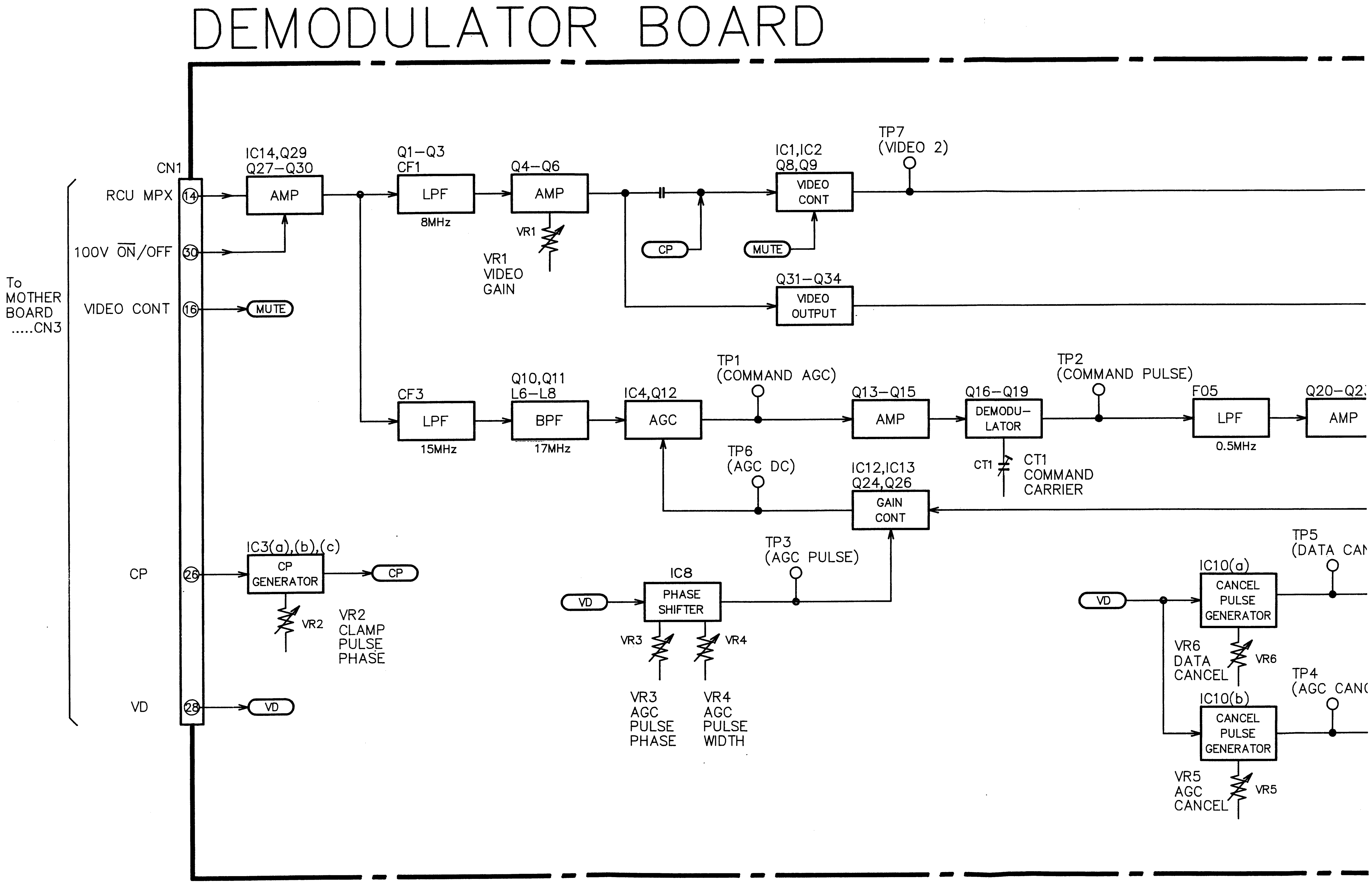
DETECTS CABLE MISCONNECTION CONDITION AT POWER ON.

L:CABLE CONNECTED PROPERLY
H:CABLE MISCONNECTED

H:ACTIVATES PROTECTION CIRCUIT. (I.E., SHUTS OFF 100V.)

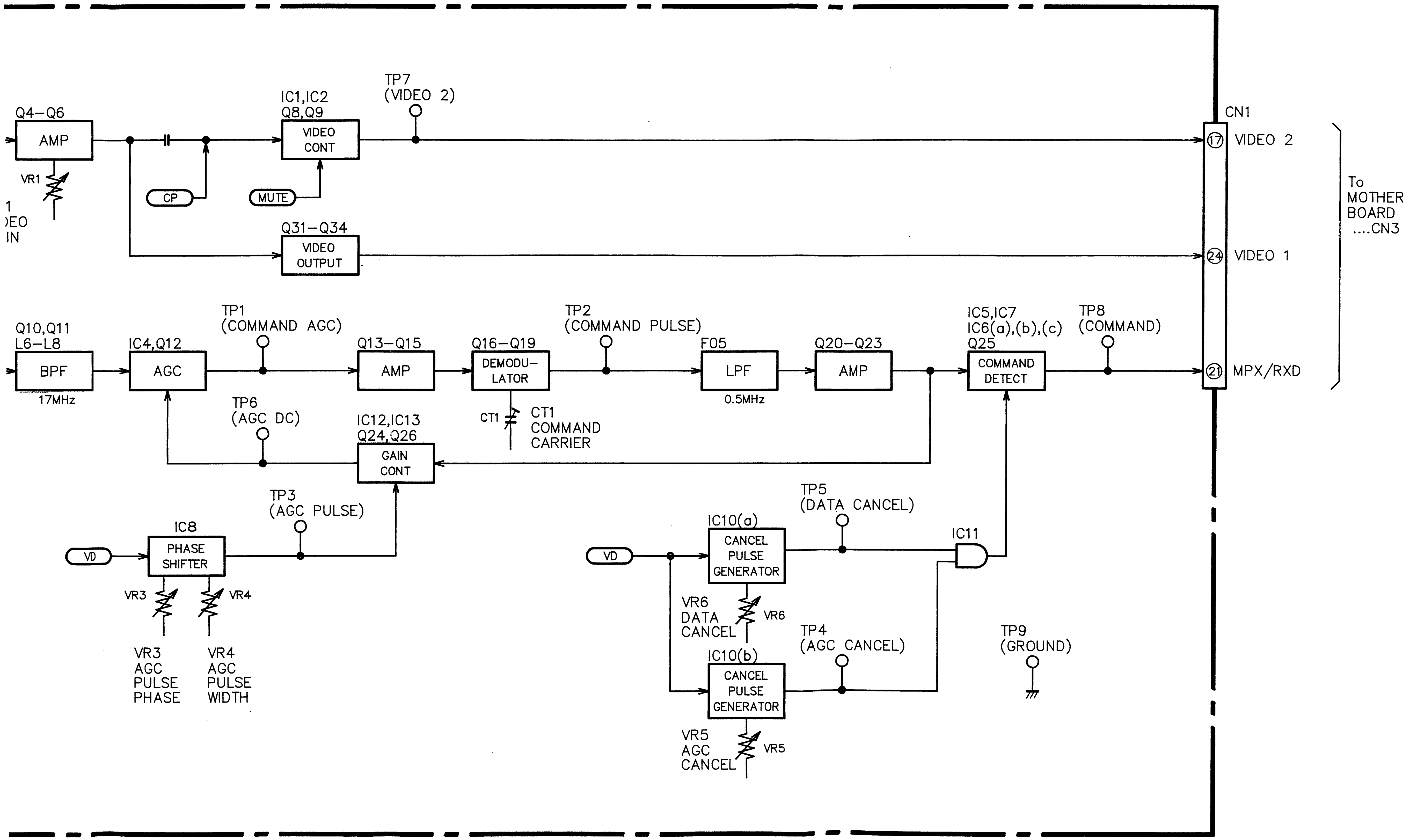
BECOMES H FOR A CERTAIN PERIOD OF TIME AT POWER ON.

BLOCK DIAGRAM OF DEMODULATOR BOARD

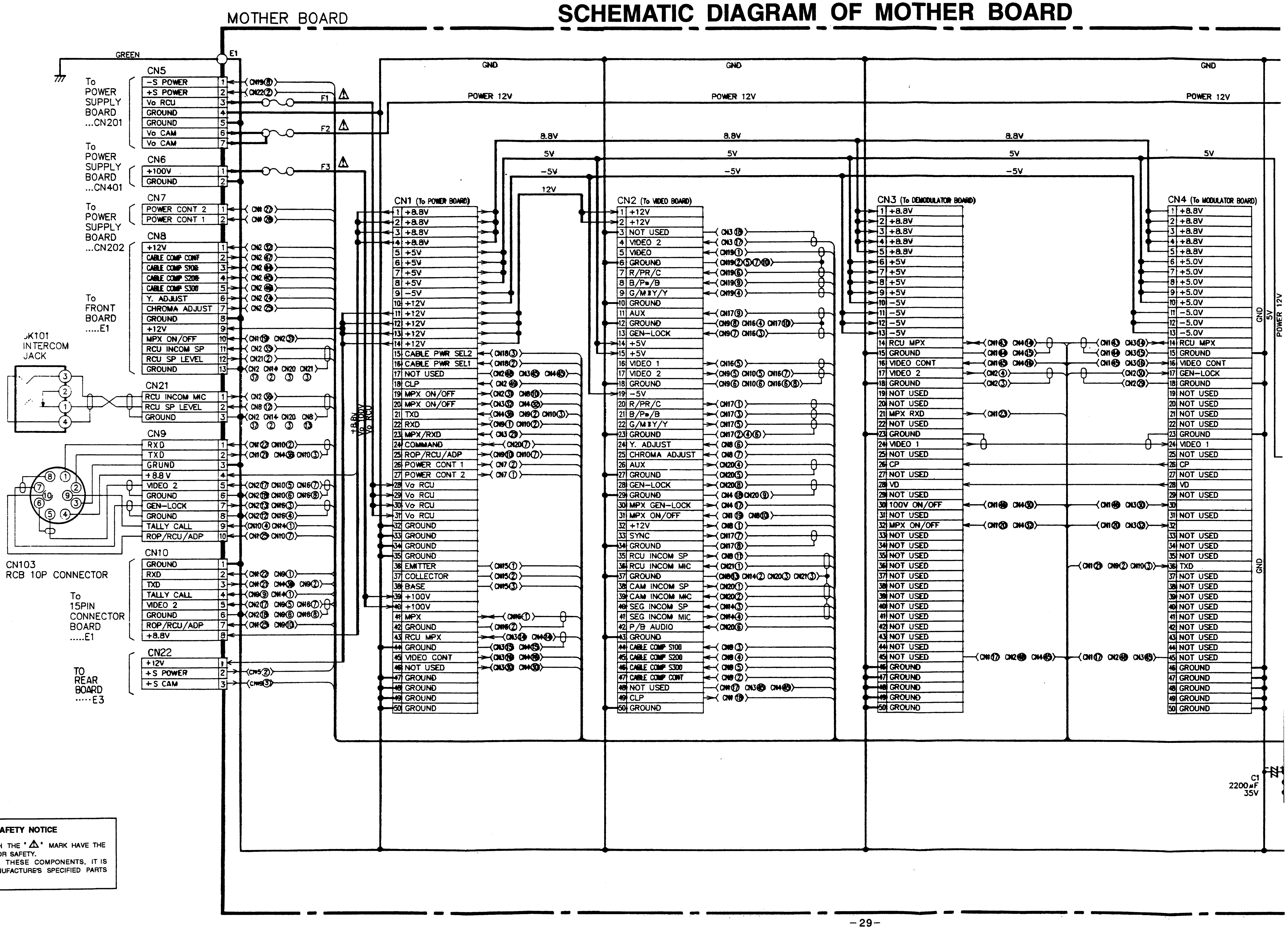

DEMODULATOR BOARD
To MOTHER BOARD CN3
CN1
RCU MPX
14
100V ON/OFF
30
VIDEO CONT
16
CP
26
VD
28
IC14,Q29
Q27–Q30
AMP
MUTE
Q1–Q3
CF1
LPF
8MHz
Q4–Q6
AMP
VR1
VR1 VIDEO GAIN
CP
IC1,IC2
Q8,Q9
VIDEO CONT
MUTE
TP7 (VIDEO 2)
Q31–Q34
VIDEO OUTPUT
CF3
LPF
15MHz
Q10,Q11
L6–L8
BPF
17MHz
IC4,Q12
AGC
TP1 (COMMAND AGC)
Q13–Q15
AMP
Q16–Q19
DEMODU-LATOR
CT1
CT1 COMMAND CARRIER
TP2 (COMMAND PULSE)
F05
LPF
0.5MHz
Q20–Q2
AMP
TP6 (AGC DC)
IC12,IC13
Q24,Q26
GAIN CONT
IC3(a),(b),(c)
CP GENERATOR
CP
VR2
VR2 CLAMP PULSE PHASE
TP3 (AGC PULSE)
IC8
VD
PHASE SHIFTER
VR3
VR4
VR3 AGC PULSE PHASE
VR4 AGC PULSE WIDTH
VD
TP5 (DATA CAN
IC10(a)
CANCEL PULSE GENERATOR
VR6 DATA CANCEL
VR6
TP4 (AGC CAN
IC10(b)
CANCEL PULSE GENERATOR
VR5 AGC CANCEL
VR5
VD

BLOCK DIAGRAM OF DEMODULATOR BOARD

TOR BOARD


Q4–Q6
AMP
VR1
1
)EO
IN
CP
IC1,IC2
Q8,Q9
VIDEO CONT
MUTE
TP7
(VIDEO 2)
Q31–Q34
VIDEO OUTPUT
CN1
⑰ VIDEO 2
㉔ VIDEO 1
㉑ MPX/RXD
To MOTHER BOARD CN3
Q10,Q11
L6–L8
BPF
17MHz
IC4,Q12
AGC
TP1
(COMMAND AGC)
Q13–Q15
AMP
Q16–Q19
DEMODU–LATOR
CT1
CT1 COMMAND CARRIER
TP2
(COMMAND PULSE)
F05
LPF
0.5MHz
Q20–Q23
AMP
IC5,IC7
IC6(a),(b),(c)
Q25
COMMAND DETECT
TP8
(COMMAND)
TP6
(AGC DC)
IC12,IC13
Q24,Q26
GAIN CONT
TP3
(AGC PULSE)
IC8
VD
PHASE SHIFTER
VR3
VR4
VR3 AGC PULSE PHASE
VR4 AGC PULSE WIDTH
TP5
(DATA CANCEL)
IC10(a)
VD
CANCEL PULSE GENERATOR
IC11
VR6 DATA CANCEL
VR6
TP4
(AGC CANCEL)
IC10(b)
CANCEL PULSE GENERATOR
VR5 AGC CANCEL
VR5
TP9
(GROUND)

SCHEMATIC DIAGRAM OF MOTHER BOARD


MOTHER BOARD
GREEN
E1
To POWER SUPPLY BOARD ...CN201
CN5
1 -S POWER
2 +S POWER
3 Vo RCU
4 GROUND
5 GROUND
6 Vo CAM
7 Vo CAM
F1
F2
F3
To POWER SUPPLY BOARD ...CN401
CN6
1 +100V
2 GROUND
To POWER SUPPLY BOARD ...CN202
CN7
1 POWER CONT 2
2 POWER CONT 1
CN8
1 +12V
2 CABLE COMP CONT
3 CABLE COMP S108
4 CABLE COMP S208
5 CABLE COMP S308
6 Y. ADJUST
7 CHROMA ADJUST
8 GROUND
9 +12V
10 MPX ON/OFF
11 RCU INCOM SP
12 RCU SP LEVEL
13 GROUND
To FRONT BOARD E1
JK101 INTERCOM JACK
CN21
1 RCU INCOM MIC
2 RCU SP LEVEL
3 GROUND
CN9
1 RXD
2 TXD
3 GRUND
4 +8.8V
5 VIDEO 2
6 GROUND
7 GEN-LOCK
8 GROUND
9 TALLY CALL
10 ROP/RCU/ADP
CN103 RCB 10P CONNECTOR
CN10
1 GROUND
2 RXD
3 TXD
4 TALLY CALL
5 VIDEO 2
6 GROUND
7 ROP/RCU/ADP
8 +8.8V
To 15PIN CONNECTOR BOARD E1
CN22
1 +12V
2 +S POWER
3 +S CAM
TO REAR BOARD ·····E3
+8.8V
Vo 100V
Vo RCU
GND
POWER 12V
8.8V
5V
-5V
12V
CN1 (To POWER BOARD)
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +5V
6 +5V
7 +5V
8 +5V
9 -5V
10 +12V
11 +12V
12 +12V
13 +12V
14 +12V
15 CABLE PWR SEL2
16 CABLE PWR SEL1
17 NOT USED
18 CLP
19 MPX ON/OFF
20 MPX ON/OFF
21 TXD
22 RXD
23 MPX/RXD
24 COMMAND
25 ROP/RCU/ADP
26 POWER CONT 1
27 POWER CONT 2
28 Vo RCU
29 Vo RCU
30 Vo RCU
31 Vo RCU
32 GROUND
33 GROUND
34 GROUND
35 GROUND
36 EMITTER
37 COLLECTOR
38 BASE
39 +100V
40 +100V
41 MPX
42 GROUND
43 RCU MPX
44 GROUND
45 VIDEO CONT
46 NOT USED
47 GROUND
48 GROUND
49 GROUND
50 GROUND
CN2 (To VIDEO BOARD)
1 +12V
2 +12V
3 NOT USED
4 VIDEO 2
5 VIDEO
6 GROUND
7 R/PR/C
8 B/Pв/B
9 G/M·Y/Y
10 GROUND
11 AUX
12 GROUND
13 GEN-LOCK
14 +5V
15 +5V
16 VIDEO 1
17 VIDEO 2
18 GROUND
19 -5V
20 R/PR/C
21 B/Pв/B
22 G/M·Y/Y
23 GROUND
24 Y. ADJUST
25 CHROMA ADJUST
26 AUX
27 GROUND
28 GEN-LOCK
29 GROUND
30 MPX GEN-LOCK
31 MPX ON/OFF
32 +12V
33 SYNC
34 GROUND
35 RCU INCOM SP
36 RCU INCOM MIC
37 GROUND
38 CAM INCOM SP
39 CAM INCOM MIC
40 SEG INCOM SP
41 SEG INCOM MIC
42 P/B AUDIO
43 GROUND
44 CABLE COMP S108
45 CABLE COMP S208
46 CABLE COMP S308
47 CABLE COMP CONT
48 NOT USED
49 CLP
50 GROUND
CN3 (To DEMODULATOR BOARD)
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +8.8V
6 +5V
7 +5V
8 +5V
9 +5V
10 -5V
11 -5V
12 -5V
13 -5V
14 RCU MPX
15 GROUND
16 VIDEO CONT
17 VIDEO 2
18 GROUND
19 NOT USED
20 NOT USED
21 MPX RXD
22 NOT USED
23 GROUND
24 VIDEO 1
25 NOT USED
26 CP
27 NOT USED
28 VD
29 NOT USED
30 100V ON/OFF
31 NOT USED
32 MPX ON/OFF
33 NOT USED
34 NOT USED
35 NOT USED
36 NOT USED
37 NOT USED
38 NOT USED
39 NOT USED
40 NOT USED
41 NOT USED
42 NOT USED
43 NOT USED
44 NOT USED
45 NOT USED
46 GROUND
47 GROUND
48 GROUND
49 GROUND
50 GROUND
CN4 (To MODULATOR BOARD)
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +8.8V
6 +5.0V
7 +5.0V
8 +5.0V
9 +5.0V
10 -5.0V
11 -5.0V
12 -5.0V
13 -5.0V
14 RCU MPX
15 GROUND
16 VIDEO CONT
17 GEN-LOCK
18 GROUND
19 NOT USED
20 NOT USED
21 NOT USED
22 NOT USED
23 GROUND
24 VIDEO 1
25 NOT USED
26 CP
27 NOT USED
28 VD
29 NOT USED
30
31 NOT USED
32
33 NOT USED
34 NOT USED
35 NOT USED
36 TXD
37 NOT USED
38 NOT USED
39 NOT USED
40 NOT USED
41 NOT USED
42 NOT USED
43 NOT USED
44 NOT USED
45 NOT USED
46 GROUND
47 GROUND
48 GROUND
49 GROUND
50 GROUND
GND
5V
POWER 12V
C1 2200μF 35V

PRODUCT SAFETY NOTICE

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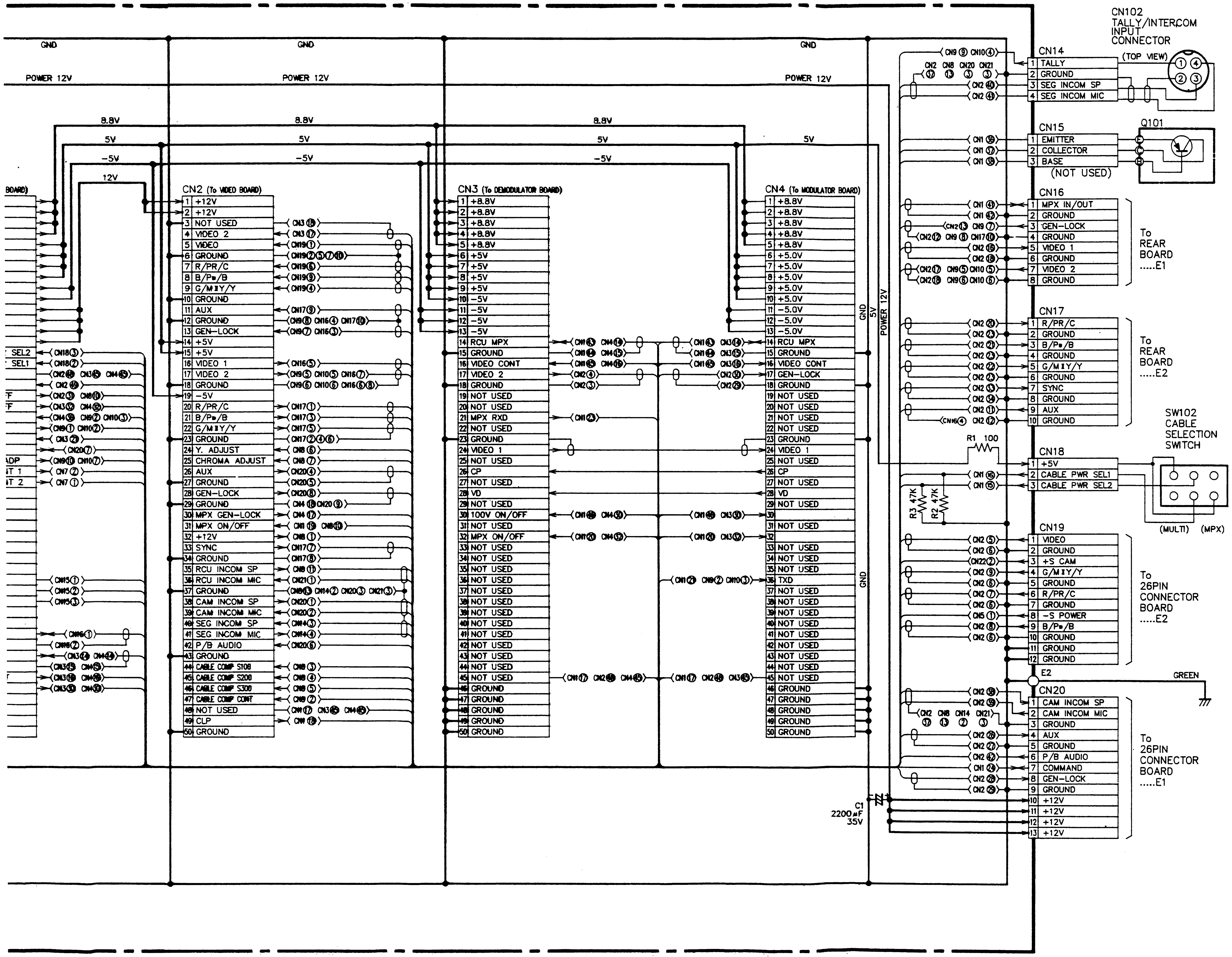
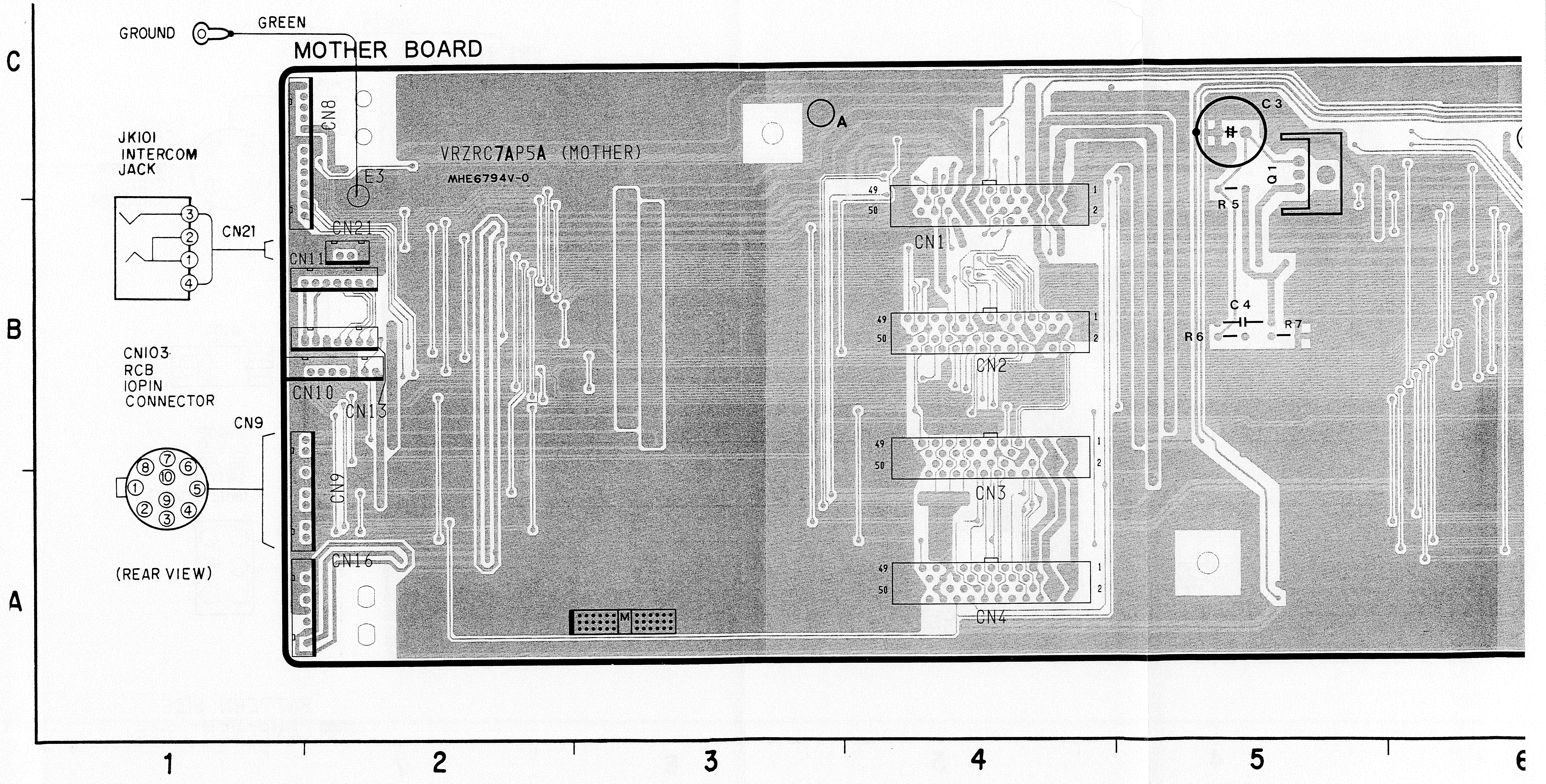
SCHEMATIC DIAGRAM OF MOTHER BOARD


GND
POWER 12V
8.8V
5V
-5V
12V
CN2 (To VIDEO BOARD)
1 +12V
2 +12V
3 NOT USED
4 VIDEO 2
5 VIDEO
6 GROUND
7 R/PR/C
8 B/PB/B
9 G/M Y/Y
10 GROUND
11 AUX
12 GROUND
13 GEN-LOCK
14 +5V
15 +5V
16 VIDEO 1
17 VIDEO 2
18 GROUND
19 -5V
20 R/PR/C
21 B/PB/B
22 G/M Y/Y
23 GROUND
24 Y. ADJUST
25 CHROMA ADJUST
26 AUX
27 GROUND
28 GEN-LOCK
29 GROUND
30 MPX GEN-LOCK
31 MPX ON/OFF
32 +12V
33 SYNC
34 GROUND
35 RCU INCOM SP
36 RCU INCOM MIC
37 GROUND
38 CAM INCOM SP
39 CAM INCOM MIC
40 SEG INCOM SP
41 SEG INCOM MIC
42 P/B AUDIO
43 GROUND
44 CABLE COMP S108
45 CABLE COMP S208
46 CABLE COMP S308
47 CABLE COMP CONT
48 NOT USED
49 CLP
50 GROUND
CN3 (To DEMODULATOR BOARD)
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +8.8V
6 +5V
7 +5V
8 +5V
9 +5V
10 -5V
11 -5V
12 -5V
13 -5V
14 RCU MPX
15 GROUND
16 VIDEO CONT
17 VIDEO 2
18 GROUND
19 NOT USED
20 NOT USED
21 MPX RXD
22 NOT USED
23 GROUND
24 VIDEO 1
25 NOT USED
26 CP
27 NOT USED
28 VD
29 NOT USED
30 100V ON/OFF
31 NOT USED
32 MPX ON/OFF
33–45 NOT USED
46–50 GROUND
CN4 (To MODULATOR BOARD)
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +8.8V
6 +5.0V
7 +5.0V
8 +5.0V
9 +5.0V
10 +5.0V
11 -5.0V
12 -5.0V
13 -5.0V
14 RCU MPX
15 GROUND
16 VIDEO CONT
17 GEN-LOCK
18 GROUND
19 NOT USED
20 NOT USED
21 NOT USED
22 NOT USED
23 GROUND
24 VIDEO 1
25 NOT USED
26 CP
27 NOT USED
28 VD
29 NOT USED
30
31 NOT USED
32
33 NOT USED
34 NOT USED
35 NOT USED
36 TXD
37–45 NOT USED
46–50 Ground
SEL2
SEL1
GND
5V
POWER 12V
CN102 TALLY/INTERCOM INPUT CONNECTOR
(TOP VIEW)
CN14
1 TALLY
2 GROUND
3 SEG INCOM SP
4 SEG INCOM MIC
CN15
1 EMITTER
2 COLLECTOR
3 BASE
(NOT USED)
Q101
CN16
1 MPX IN/OUT
2 GROUND
3 GEN-LOCK
4 GROUND
5 VIDEO 1
6 GROUND
7 VIDEO 2
8 GROUND
To REAR BOARD E1
CN17
1 R/PR/C
2 GROUND
3 B/PB/B
4 GROUND
5 G/M Y/Y
6 GROUND
7 SYNC
8 GROUND
9 AUX
10 GROUND
To REAR BOARD E2
R1 100
CN18
1 +5V
2 CABLE PWR SEL1
3 CABLE PWR SEL2
R3 47K
R2 47K
SW102 CABLE SELECTION SWITCH
(MULTI) (MPX)
CN19
1 VIDEO
2 GROUND
3 +S CAM
4 G/M Y/Y
5 GROUND
6 R/PR/C
7 GROUND
8 -S POWER
9 B/PB/B
10 GROUND
11 GROUND
12 GROUND
To 26PIN CONNECTOR BOARD E2
E2
GREEN
CN20
1 CAM INCOM SP
2 CAM INCOM MIC
3 GROUND
4 AUX
5 GROUND
6 P/B AUDIO
7 COMMAND
8 GEN-LOCK
9 GROUND
10 +12V
11 +12V
12 +12V
13 +12V
To 26PIN CONNECTOR BOARD E1
C1 2200μF 35V

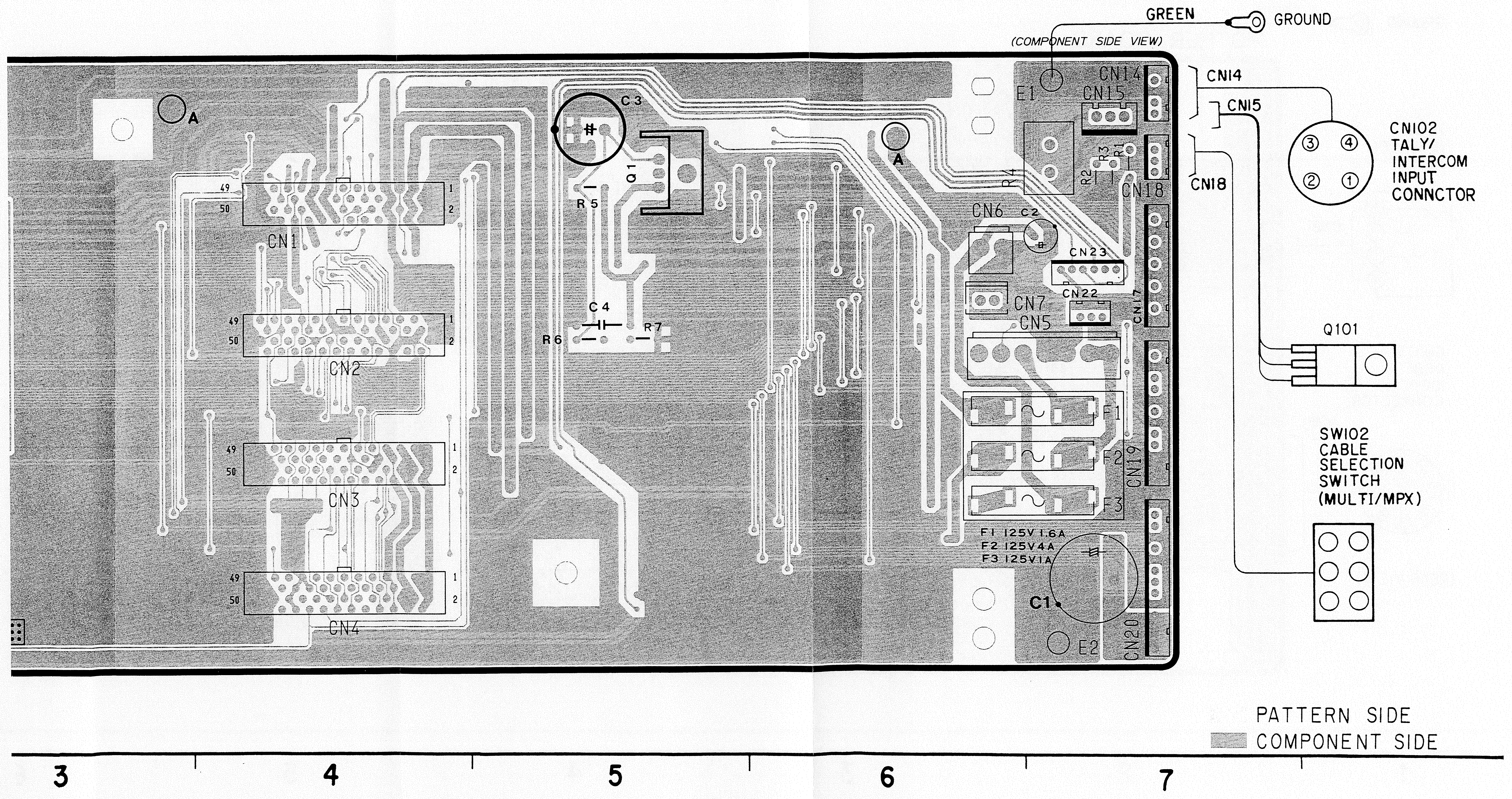
< Voltage >

	B	C	E
Q1	0.5	0.5	0.4
Q101	110.8	–	110.8

CONDUCTOR VIEW OF MOTHER BOARD


GROUND
GREEN
MOTHER BOARD
JK101
INTERCOM
JACK
CN21
CN103
RCB
10PIN
CONNECTOR
CN9
(REAR VIEW)
CN8
E3
CN21
CN11
CN10
CN13
CN9
CN16
VRZRC7AP5A (MOTHER)
MHE6794V-0
M
A
CN1
CN2
CN3
CN4
49
50
1
2
C3
Q1
R5
C4
R6
R7
C
B
A
1
2
3
4
5

CONDUCTOR VIEW OF MOTHER BOARD


GREEN
GROUND
(COMPONENT SIDE VIEW)
A
CN1
CN2
CN3
CN4
49
50
1
2
C3
Q1
R5
C4
R6
R7
E1
CN14
CN15
R1
R2
R3
R4
CN18
CN6
C2
CN23
CN22
CN7
CN5
CN17
CN19
CN20
F1
F2
F3
F1 125V1.6A
F2 125V4A
F3 125V1A
C1
E2
CN14
CN15
CN18
③ ④
② ①
CN102
TALY/
INTERCOM
INPUT
CONNCTOR
Q101
SW102
CABLE
SELECTION
SWITCH
(MULTI/MPX)
PATTERN SIDE
▨ COMPONENT SIDE
3
4
5
6
7

SCHEMATIC DIAGRAM OF POWER SUPPLY BOARD

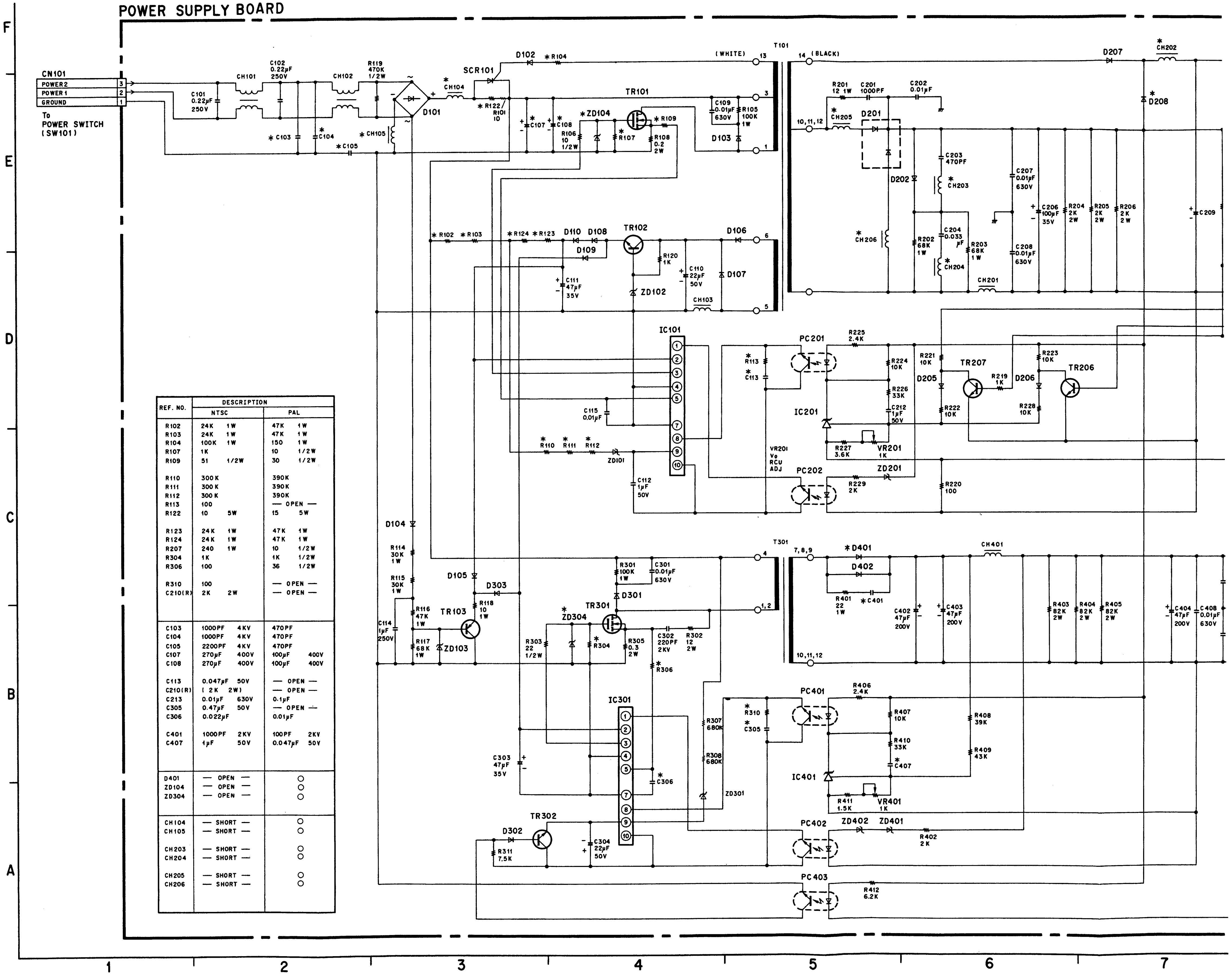
(Voltages)

	IC101	IC201	IC301	IC401
Pin 1	4.3	9.3	4.4	15.1
2	10.6	0.1	11.1	0
3	3.7	2.5	4.1	0
4	4.3		0	
5	4.3		0	
6	-		-	
7	4.3		4.4	
8	4.7		3.3	
9	5.2		6.0	
10	6.1		6.2	

	B	C	E
TR101	5.3	-	5.3
102	11.1	11.6	11.1
103	12.8	4.5	13.2
201	15.1	15.1	15.8
202	15.8	15.8	15.1
203	15.0	15.8	15.8
204	0	2.0	0
205	0	0	0.7
206	0	0	0.7
207	0	8.8	0
301	4.2	-	4.4
302	6.0	6.3	6.6

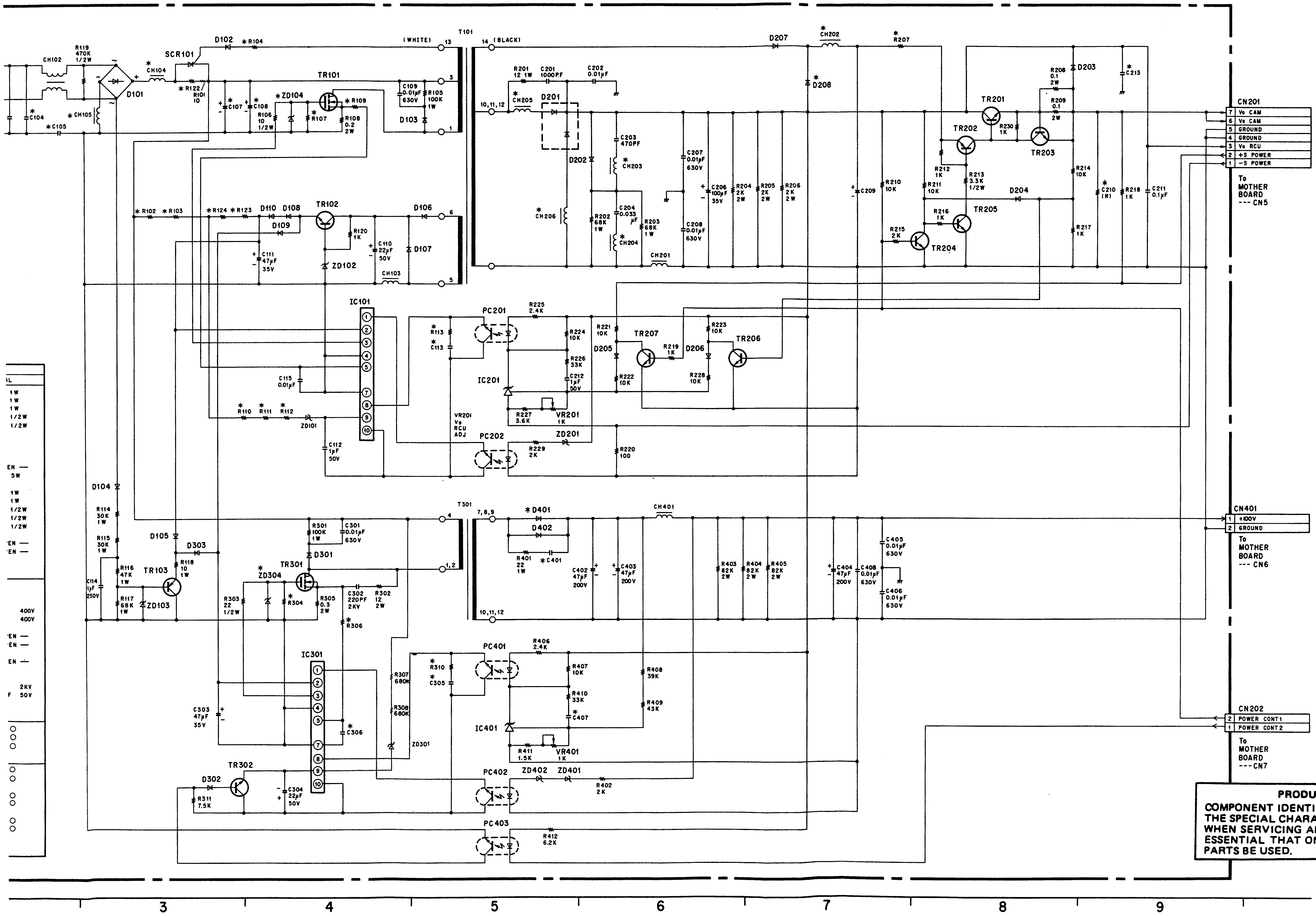
(Index)
POWER SUPPLY BOARD

IC101	D4	D110	E4
IC201	D5	D201	E5
IC301	B4	D202	E6
IC401	B5	D203	E8
TR101	E4	D204	E8
TR102	E4	D205	D6
TR103	B3	D206	D6
TR201	E8	D207	F7
TR202	E8	D208	E7
TR203	E8	D301	C4
TR204	D8	D302	A3
TR205	D8	D303	C3
TR206	D6	D402	C5
TR207	D6	ZD101	C4
TR301	B4	ZD102	D4
TR302	A3	ZD103	B3
D101	E3	ZD201	C5
D102	F3	ZD301	A4
D103	E5	ZD401	A5
D104	C3	ZD402	A5
D105	C3	PC201	D5
D106	E5	PC202	C5
D107	D4	PC401	B5
D108	E4	PC402	A5
D109	D4	PC403	A5
		SCR101	E3


POWER SUPPLY BOARD
F
E
D
C
B
A
1
2
3
4
5
6
7
CN101
POWER 2
POWER 1
GROUND
To POWER SWITCH (SW101)
C101 0.22μF 250V
CH101
C102 0.22μF 250V
CH102
R119 470K 1/2W
*C103
*C104
*C105
*CH105
*CH104
D101
SCR101
*R122/R101 10
D102
*R104
*C107
*C108
*ZD104
R106 10 1/2W
*R107
TR101
*R109
*R108 0.2 2W
C109 0.01μF 630V
R105 100K 1W
D103
(WHITE)
T101
(BLACK)
*R102
*R103
*R124
*R123
D110
D108
D109
TR102
R120 1K
C110 22μF 50V
D106
D107
C111 47μF 35V
ZD102
CH103
IC101
C115 0.01μF
*R110
*R111
*R112
ZD101
C112 1μF 50V
*R113
*C113
D104
R114 30K 1W
R115 30K 1W
C114 1μF 250V
D105
D303
R116 47K 1W
R117 68K 1W
TR103
R118 10 1W
ZD103
*ZD304
TR301
R301 100K 1W
C301 0.01μF 630V
D301
R303 22 1/2W
*R304
R305 0.3 2W
C302 220PF 2KV
R302 12 2W
*R306
IC301
C303 47μF 35V
*C306
ZD301
TR302
D302
R311 7.5K
C304 22μF 50V
R307 680K
R308 680K
T301
R201 12 1W
C201 1000PF
C202 0.01μF
*CH205
D201
D202
C203 470PF
*CH203
C207 0.01μF 630V
C206 100μF 35V
R204 2K 2W
R205 2K 2W
R206 2K 2W
*CH206
R202 68K 1W
C204 0.033μF
R203 68K 1W
*CH204
C208 0.01μF 630V
CH201
D207
*CH202
*D208
C209
PC201
R225 2.4K
R224 10K
R226 33K
C212 1μF 50V
IC201
R227 3.6K
VR201 1K
VR201 Vo RCU ADJ
PC202
R229 2K
ZD201
R221 10K
D205
R222 10K
TR207
R219 1K
D206
R223 10K
R228 10K
TR206
R220 100
*D401
D402
R401 22 1W
*C401
C402 47μF 200V
C403 47μF 200V
CH401
R403 82K 2W
R404 82K 2W
R405 82K 2W
C404 47μF 200V
C408 0.01μF 630V
PC401
R406 2.4K
*R310
*C305
R407 10K
R410 33K
*C407
R408 39K
R409 43K
IC401
R411 1.5K
VR401 1K
PC402
ZD402
ZD401
R402 2K
PC403
R412 6.2K

REF. NO.	DESCRIPTION	
	NTSC	PAL
R102	24K 1W	47K 1W
R103	24K 1W	47K 1W
R104	100K 1W	150 1W
R107	1K	10 1/2W
R109	51 1/2W	30 1/2W
R110	300K	390K
R111	300K	390K
R112	300K	390K
R113	100	— OPEN —
R122	10 5W	15 5W
R123	24K 1W	47K 1W
R124	24K 1W	47K 1W
R207	240 1W	10 1/2W
R304	1K	1K 1/2W
R306	100	36 1/2W
R310	100	— OPEN —
C210(R)	2K 2W	— OPEN —
C103	1000PF 4KV	470PF
C104	1000PF 4KV	470PF
C105	2200PF 4KV	470PF
C107	270μF 400V	100μF 400V
C108	270μF 400V	100μF 400V
C113	0.047μF 50V	— OPEN —
C210(R)	(2K 2W)	— OPEN —
C213	0.01μF 630V	0.1μF
C305	0.47μF 50V	— OPEN —
C306	0.022μF	0.01μF
C401	1000PF 2KV	100PF 2KV
C407	1μF 50V	0.047μF 50V
D401	— OPEN —	○
ZD104	— OPEN —	○
ZD304	— OPEN —	○
CH104	— SHORT —	○
CH105	— SHORT —	○
CH203	— SHORT —	○
CH204	— SHORT —	○
CH205	— SHORT —	○
CH206	— SHORT —	○

SCHEMATIC DIAGRAM OF POWER SUPPLY BOARD


T101
T301
TR101
TR102
TR103
TR201
TR202
TR203
TR204
TR205
TR206
TR207
TR301
TR302
IC101
IC201
IC301
IC401
PC201
PC202
PC401
PC402
PC403
SCR101
D101
(WHITE)
14 (BLACK)
VR201 Vo RCU ADJ
CN201
7 Vo CAM
6 Vo CAM
5 GROUND
4 GROUND
3 Vo RCU
2 +S POWER
1 -S POWER
To MOTHER BOARD ---CN5
CN401
1 +100V
2 GROUND
To MOTHER BOARD ---CN6
CN202
2 POWER CONT1
1 POWER CONT2
To MOTHER BOARD ---CN7
3
4
5
6
7
8
9

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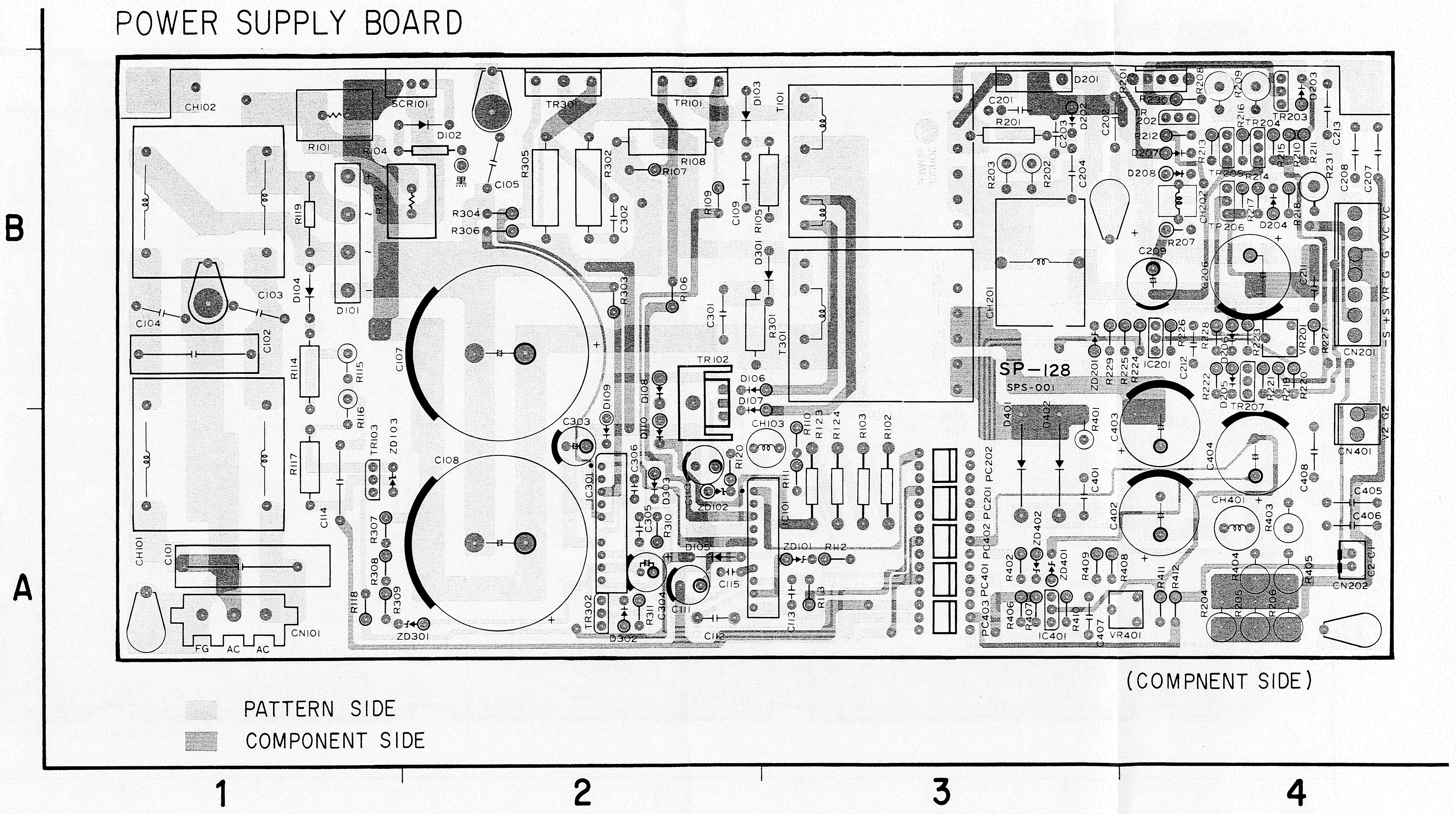
CONDUCTOR VIEW OF POWER SUPPLY BOARD

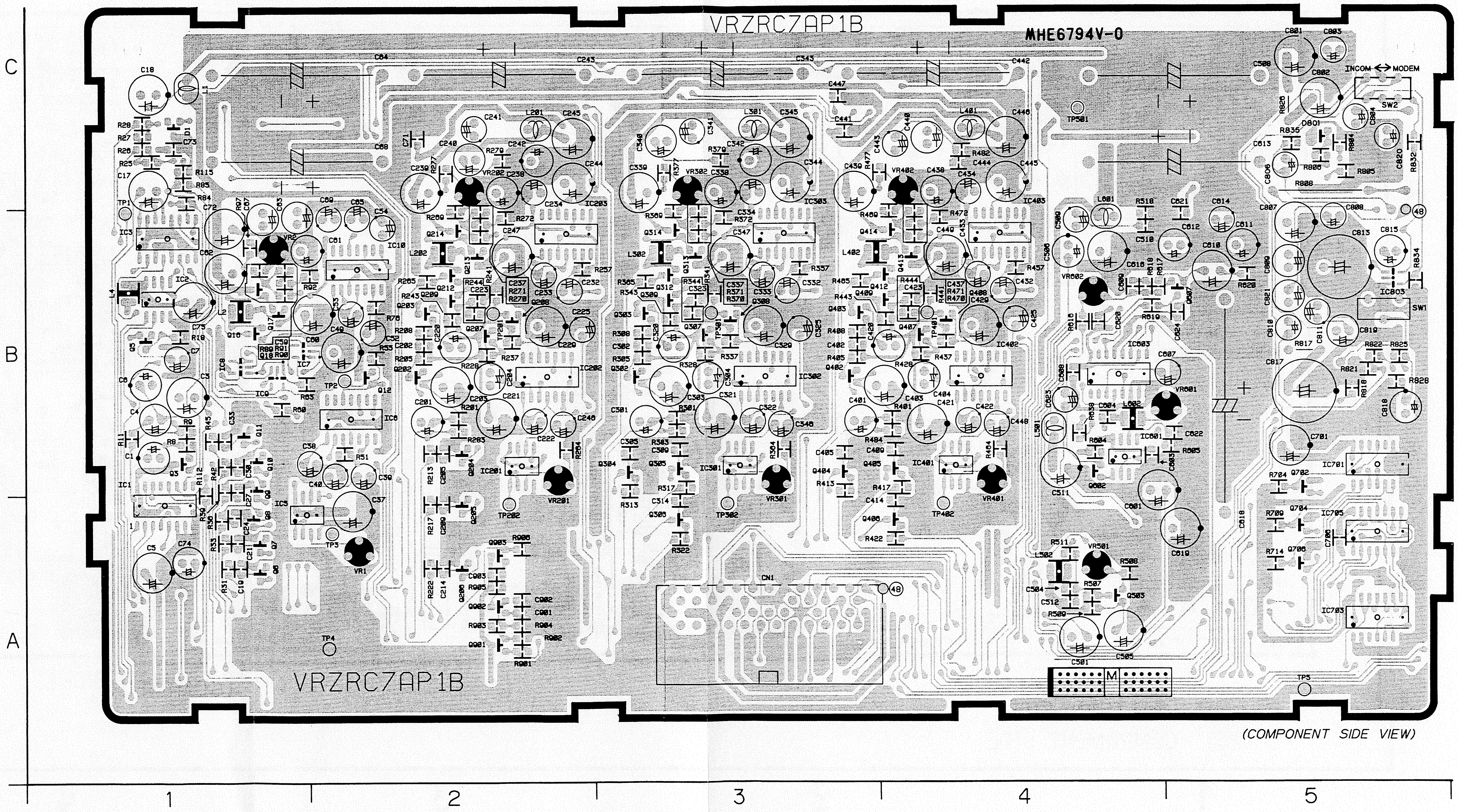

POWER SUPPLY BOARD
B
A
1
2
3
4
(COMPNENT SIDE)
▨ PATTERN SIDE
▨ COMPONENT SIDE
SP-128
SPS-001
CH102
CH101
CH103
CH201
CH202
CH401
SCR101
TR101
TR102
TR103
TR201
TR202
TR203
TR204
TR205
TR206
TR207
TR301
TR302
T101
T301
IC101
IC201
IC301
IC401
D101
D102
D103
D104
D105
D106
D107
D108
D109
D110
D201
D202
D203
D204
D205
D206
D207
D208
D301
D302
D303
D401
D402
ZD101
ZD102
ZD103
ZD201
ZD301
ZD401
ZD402
PC201
PC202
PC401
PC402
PC403
C101
C102
C103
C104
C105
C107
C108
C109
C111
C112
C113
C114
C115
C201
C202
C203
C204
C207
C208
C209
C211
C212
C213
C301
C302
C303
C304
C305
C306
C401
C402
C403
C404
C405
C406
C407
C408
R101
R104
R105
R106
R107
R108
R109
R110
R111
R112
R113
R114
R115
R116
R117
R118
R119
R120
R123
R124
R201
R202
R203
R204
R205
R206
R207
R208
R209
R210
R211
R212
R213
R214
R215
R216
R217
R218
R219
R220
R221
R222
R223
R224
R225
R226
R227
R228
R229
R230
R231
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R311
R401
R402
R403
R404
R405
R406
R407
R408
R409
R410
R411
R412
VR201
VR401
TP206
CN101
CN201
CN202
CN401
FG
AC
AC
-S +S VR G G VC VC
V2 G2
C2 C1
黒

⟨Index⟩
POWER SUPPLY BOARD

IC101	A2	TR102	B2	TR204	B4	TR302	A2	D105	A2	D110	A2	D205	B4	D302	A2	ZD103	A1	PC201	A3	SCR101	B2
IC201	B4	TR103	A1	TR205	B4	D101	B1	D106	B2	D201	B3	D206	B4	D303	A2	ZD201	B3	PC202	A3		
IC301	A2	TR201	B4	TR206	B4	D102	B2	D107	A2	D202	B3	D207	B4	D402	A3	ZD301	A2	PC401	A3		
IC401	A3	TR202	B4	TR207	B4	D103	B2	D108	B2	D203	B4	D208	B4	ZD101	A3	ZD401	A3	PC402	A3		
TR101	B2	TR203	B4	TR301	B2	D104	B1	D109	A2	D204	B4	D301	B2	ZD102	A2	ZD402	A3	PC403	A3		

CONDUCTOR VIEW OF VIDEO BOARD (COMPONENT SIDE)

VIDEO BOARD


VRZRC7AP1B
MHE6794V-0
INCOM ↔ MODEM
SW1
SW2
CN1
VR1
VR2
VR201
VR202
VR301
VR302
VR401
VR402
VR501
VR601
VR602
TP1
TP2
TP3
TP4
TP5
TP202
TP302
TP402
TP501
VRZRC7AP1B
C
B
A
1
2
3
4
5

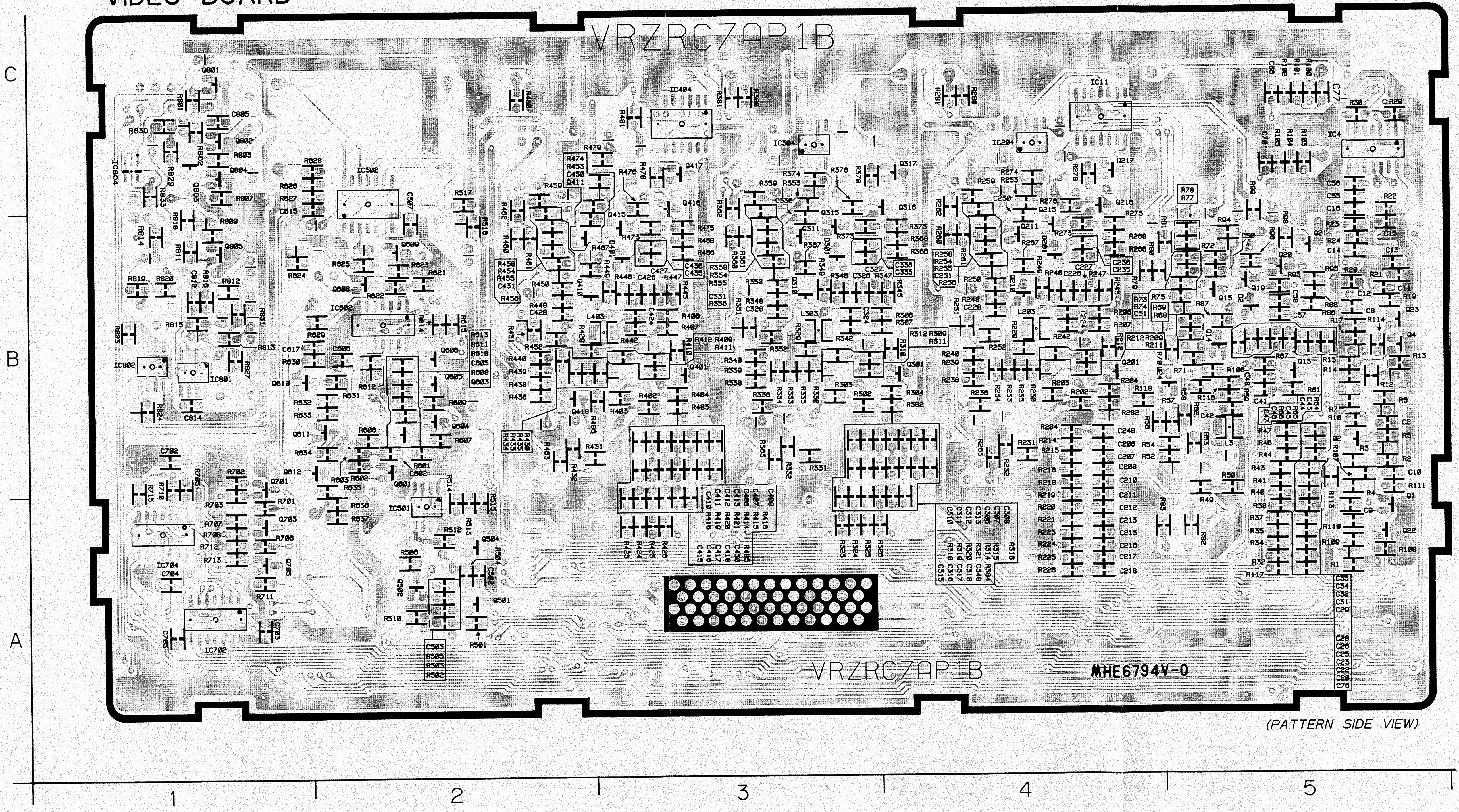
(COMPONENT SIDE VIEW)

< Index >
VIDEO BOARD
COMPONENT SIDE

IC1	A1	IC9	B1	IC303	B3	IC703	A5	Q8	A1	Q18	B1	Q208	B2	Q304	B3	Q313	B3	Q407	B4	Q602	B4	Q903	A2
IC2	B1	IC10	B2	IC401	B4	IC705	A5	Q9	B1	Q202	B2	Q209	B2	Q305	B3	Q314	B3	Q408	B4	Q607	B5	D1	C1
IC3	B1	IC201	B2	IC402	B4	IC803	B5	Q10	B1	Q203	B2	Q212	B2	Q306	A3	Q402	B3	Q409	B4	Q702	B5	D801	C5
IC5	A1	IC202	B2	IC403	B4	Q3	B1	Q11	B1	Q204	B2	Q213	B2	Q307	B3	Q403	B3	Q412	B4	Q704	A5		
IC6	B2	IC203	B2	IC601	B4	Q5	B1	Q12	B2	Q205	A2	Q214	B2	Q308	B3	Q404	B3	Q413	B4	Q706	AS		
IC7	B1	IC301	B3	IC603	B4	Q6	A1	Q16	B1	Q206	A2	Q302	B3	Q309	B3	Q405	B4	Q414	B4	Q901	A2		
IC8	B1	IC302	B3	IC701	B5	Q7	A1	Q17	B1	Q207	B2	Q303	B3	Q312	B3	Q406	A4	Q503	A4	Q902	A2		

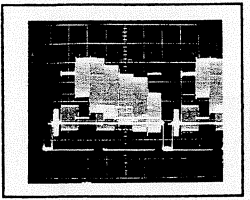
CONDUCTOR VIEW OF VIDEO BOARD (PATTERN SIDE)

VIDEO BOARD



< Index >
VIDEO BOARD
PATTERN SIDE

iC4	C5	IC602	B2	Q2	B5	Q21	B5	Q215	B4	Q316	B4	Q417	C3	Q604	B2	Q612	B2	Q804	C1
IC11	C4	IC702	A1	Q4	B5	Q22	A5	Q216	B4	Q317	C4	Q418	B2	Q605	B2	Q701	B1	Q805	B1
IC204	C4	IC704	A1	Q13	B5	Q23	B5	Q217	C4	Q401	B3	Q501	A2	Q606	B2	Q703	A1	D2	B5
IC304	C3	IC801	B1	Q14	B5	Q24	B5	Q301	B4	Q410	B2	Q502	A2	Q608	B2	Q705	A1	D201	B4
IC404	C3	IC802	B1	Q15	B5	Q201	B4	Q310	B3	Q411	B2	Q504	A2	Q609	B2	Q801	C1	D301	B3
IC501	A2	IC804	A1	Q19	B5	Q210	B4	Q311	B3	Q415	B3	Q601	B2	Q610	B1	Q802	C1	D401	B3
IC502	C3	Q1	A5	Q20	B5	Q211	B4	Q315	B3	Q416	C3	Q603	B2	Q611	B2	Q803	C1		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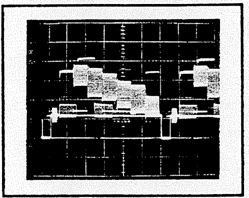
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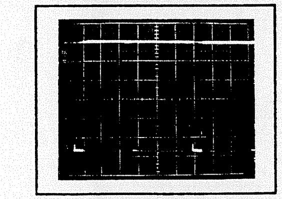
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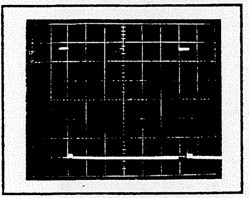
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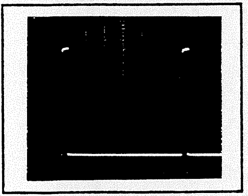
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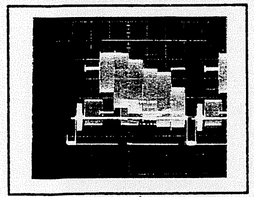
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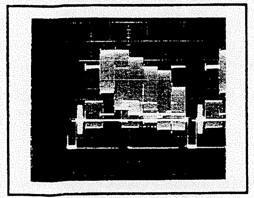
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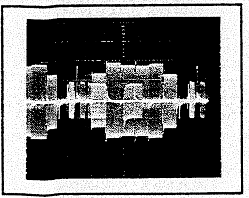
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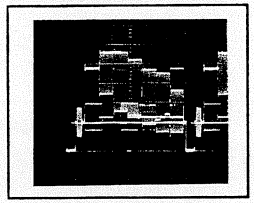
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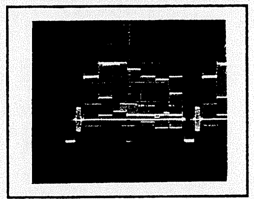
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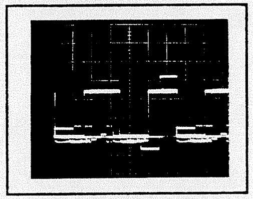
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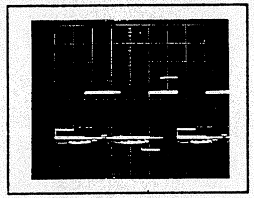
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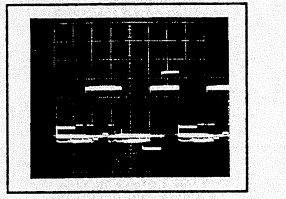
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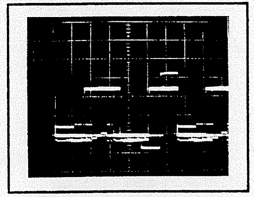
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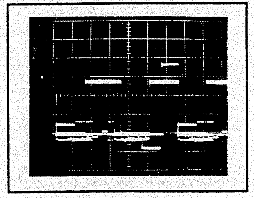
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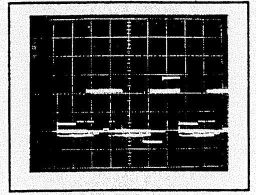
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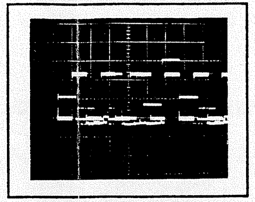
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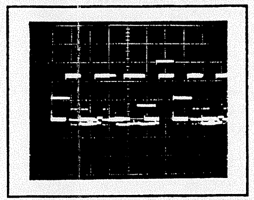
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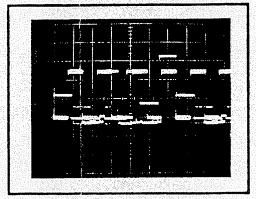
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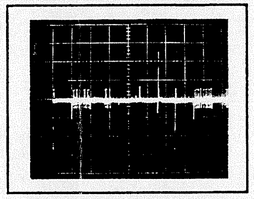
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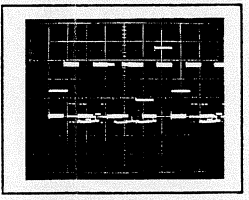
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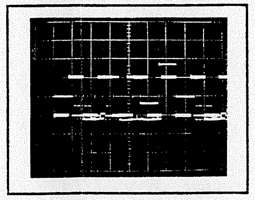
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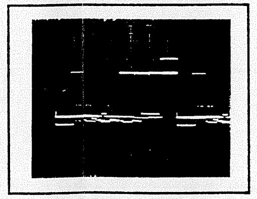
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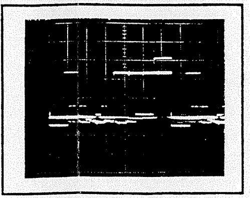
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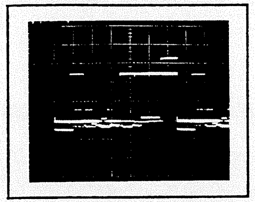
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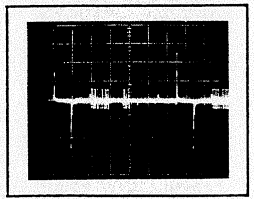
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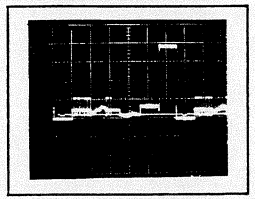
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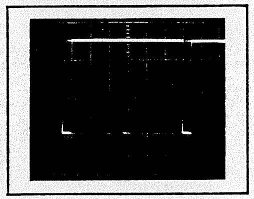
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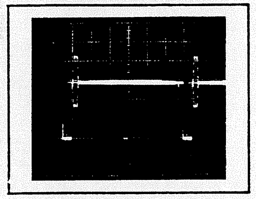
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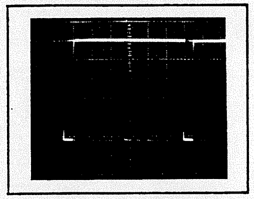
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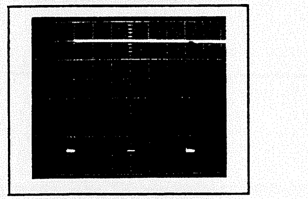
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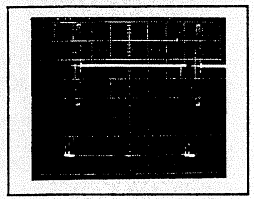
32. 10µs/DIV 0.2V/DIV

(Voltages)

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC201
Pin 1	7.4	11.0	0	0	6.5	4.0	0	2.6	0	4.0	1.7	6.5
2	7.9	2.4	4.7	5.7	6.5	0	0.1	2.6	0	3.2	1.7	6.5
3	2.3	11.4	11.6	5.7	6.5	3.2	0	0	0	3.2	1.7	6.5
4	2.3	0	1.0	11.6	0	4.0	0	0	0	4.0	2.4	0
5	5.2	10.8	11.6	4.0	4.7	0	11.6	11.6	11.6	0	0	4.8
6	0	1.2	11.6	4.0	4.7	7.9				9.6	2.4	4.8
7	0	5.8	0	4.0	4.7	0				0	0	4.8
8	0	11.5	0	5.6	11.6	4.7				6.5	1.7	11.6
9	9.1		11.0	5.6		0				0	1.9	
10	11.6		0.6	5.6		4.8				6.5	1.8	
11	11.6		11.0	0		0				0	1.7	
12	0.1		0	5.8		8.0				7.0	2.0	
13	3.5		11.6	5.8		0				0	2.1	
14	3.5		10.3	5.8		0				0	5.0	
15	7.4		0									
16	11.6		11.6									

	IC202	IC203	IC204	IC301	IC302	IC303	IC304	IC401	IC402	IC403	IC404	IC501
Pin 1	4.0	4.0	1.2	6.5	0	4.0	1.2	6.5	4.0	4.0	1.7	0
2	3.2	0	5.0	6.5	3.2	3.2	5.0	6.5	0	3.2	1.3	6.6
3	0	3.2	1.1	6.5	3.3	3.2	1.1	0	3.2	3.2	1.7	5.8
4	0	4.0	5.0	0	0	0	5.1	0	0	4.0	2.4	0
5	0	0	1.1	0	0	0	1.1	4.7	0	0	0	0
6	8.2	9.6	5.1	4.7	8.2	9.6	5.0	4.7	0	10.0	2.4	11.6
7	0	0	0	4.7	0	0	0	4.7	0	0	0	0
8	4.7	0	-5.0	11.6	4.7	0	-5.0	11.6	0	6.5	1.6	11.6
9	0	0			0	0			0	0	1.8	
10	0	6.5			0	6.4			4.8	6.4	1.8	
11	0	0			0	0			0	0	1.3	
12	0	7.0			8.6	7.0			8.5	7.0	1.1	
13	0	0			0	0			0	0	2.1	
14	0	0			0	0			0	0	4.5	
15												
16												

	IC502	IC601	IC602	IC603	IC701	IC702	IC703	IC704	IC705	IC801	IC802
Pin 1	1.7	0	10.6	0	11.6	0	0	0	0	1.3	9.1
2	1.3	0	10.6	0.1	11.6	0	0	0	0	0	0
3	1.7	0	0.9	10.1	0	0	11.6	0	0	0	10.3
4	2.4	0	10.5	10.1	0	0	0	0	0	0	0
5	0	11.6	0.9	0	11.6	0	9.1	0	0	4.5	0
6	2.4	0	0.9	0	11.6	0	9.1	0	0	9.9	0
7	0	0.1	0	0	0	0	0	0	0	4.9	0
8	1.6	11.6	0.7	0	0	0	0	11.6	0	1.3	10.3
9	1.8		0.7	11.6	0	0	0	9.1	0	1.3	
10	1.8		10.8	0	11.6	0	11.6	11.6	0		
11	1.3		0.7	9.1	0	0	0	0	0		
12	1.1		10.7	0	0	0	11.6	9.1	0		
13	2.1		10.7	0	11.6	0	11.6	0	0		
14	4.5		11.6	0	11.6	11.6	11.6	11.6	11.6		
15				0							
16				0							

	B	C	E
Q1	3.5	11.6	2.7
2	3.5	4.4	2.7
3	4.4	11.6	3.6
4	4.8	0	4.1
5	11.3	1.0	11.6
6	0	0	0
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	0	0	0
12	0	11.6	7.4
13	3.4	11.6	2.6
14	3.4	6.8	2.6
15	6.8	11.6	6.2
16	5.0	0.3	5.2
17	5.2	0	0
18	5.8	11.6	5.2
19	5.0	6.2	4.4
20	5.5	2.9	6.2
21	2.9	11.6	2.3
22	5.8	11.6	5.2
23	4.8	11.6	4.0
24	8.0	11.6	7.4
201	3.5	11.6	2.7
202	3.5	4.4	0
203	4.3	11.6	3.6
204	0	0	0
205	0	0	0
206	0	0.1	0
207	5.1	11.6	4.5
208	8.6	11.6	8.0
209	3.4	0	0
210	3.3	7.2	2.5
211	7.1	11.6	6.5
212	5.0	0.3	5.0
213	0	0	5.6
214	5.6	11.6	5.0
215	2.8	6.1	2.1
216	5.5	3.1	6.1
217	3.1	11.6	2.5
301	3.5	11.6	2.7
302	3.5	4.4	0
303	4.3	11.6	3.6
304	0	0	0
305	0	0	0
306	0	0.1	0
307	5.1	11.6	4.5
308	8.6	11.6	8.0
309	3.4	0	0
310	3.3	7.2	2.5
311	7.1	11.6	6.5
312	5.0	0.3	5.0
Q313	5.0	0	5.6
314	5.6	11.6	5.0
315	2.8	6.1	2.1
316	5.5	3.1	6.1
317	3.1	11.6	2.5
401	3.5	11.6	2.7
402	3.5	4.4	0
403	4.3	11.6	3.6
404	0	0	0
405	0	0	0
406	0	0.1	0
407	5.1	11.6	4.5
408	8.6	11.6	8.0
409	3.4	0	0
410	3.3	7.5	2.5
411	7.1	11.6	6.5
412	5.0	0.3	5.0
413	5.0	0	5.6
414	5.6	11.6	5.0
415	2.8	6.1	2.1
416	5.5	3.1	6.1
417	3.1	11.6	2.5
501	3.6	11.6	2.4
502	2.4	0	2.4
503	3.0	5.8	0
504	5.8	11.6	5.1
601	3.1	0	2.5
602	10.6	0	10.2
603	2.5	11.6	1.9
604	2.9	10.7	2.3
605	10.7	11.6	10.1
606	10.1	11.6	9.5
607	9.5	0	9.5
608	3.1	7.9	2.5
609	8.0	11.6	7.3
610	9.6	11.6	9.0
611	9.0	11.6	8.5
612	9.0	0	8.5
701	0	11.6	0
702	0	11.6	0
703	0	11.6	0
704	0	11.6	0
705	0	11.6	0
706	0	11.6	0
801	7.0	10.3	0
802	7.0	10.3	6.3
803	0.6	7.1	0.1
804	1.2	10.2	0.6
805	5.4	10.3	4.8
901	0	11.6	0
902	7.0	0	6.5
903	7.4	0	6.8

⟨Index⟩
VIDEO BOARD

IC1	E1, E2, E4
IC2	E5
IC3	E6
IC4	E7, E8
IC5	D3, D8
IC6	D4
IC7	D5
IC8	D5
IC9	D6
IC10	D7
IC11	C9, D10
IC201	C4, C7
IC202	C5
IC203	C7
IC204	C10
IC301	B4, B7
IC302	B5
IC303	B7
IC304	B10
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IC402	A5
IC403	A7
IC404	A10, B9
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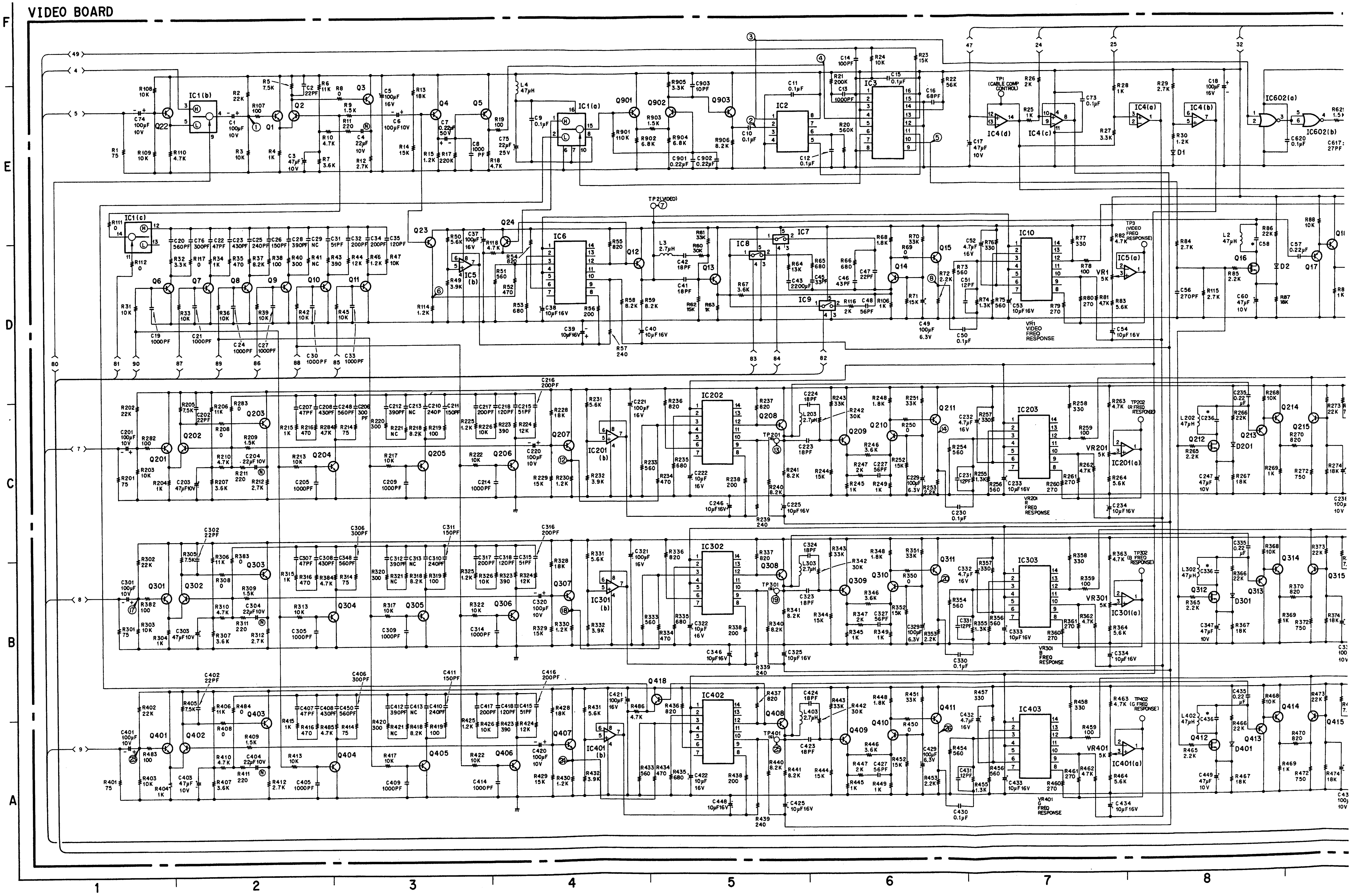
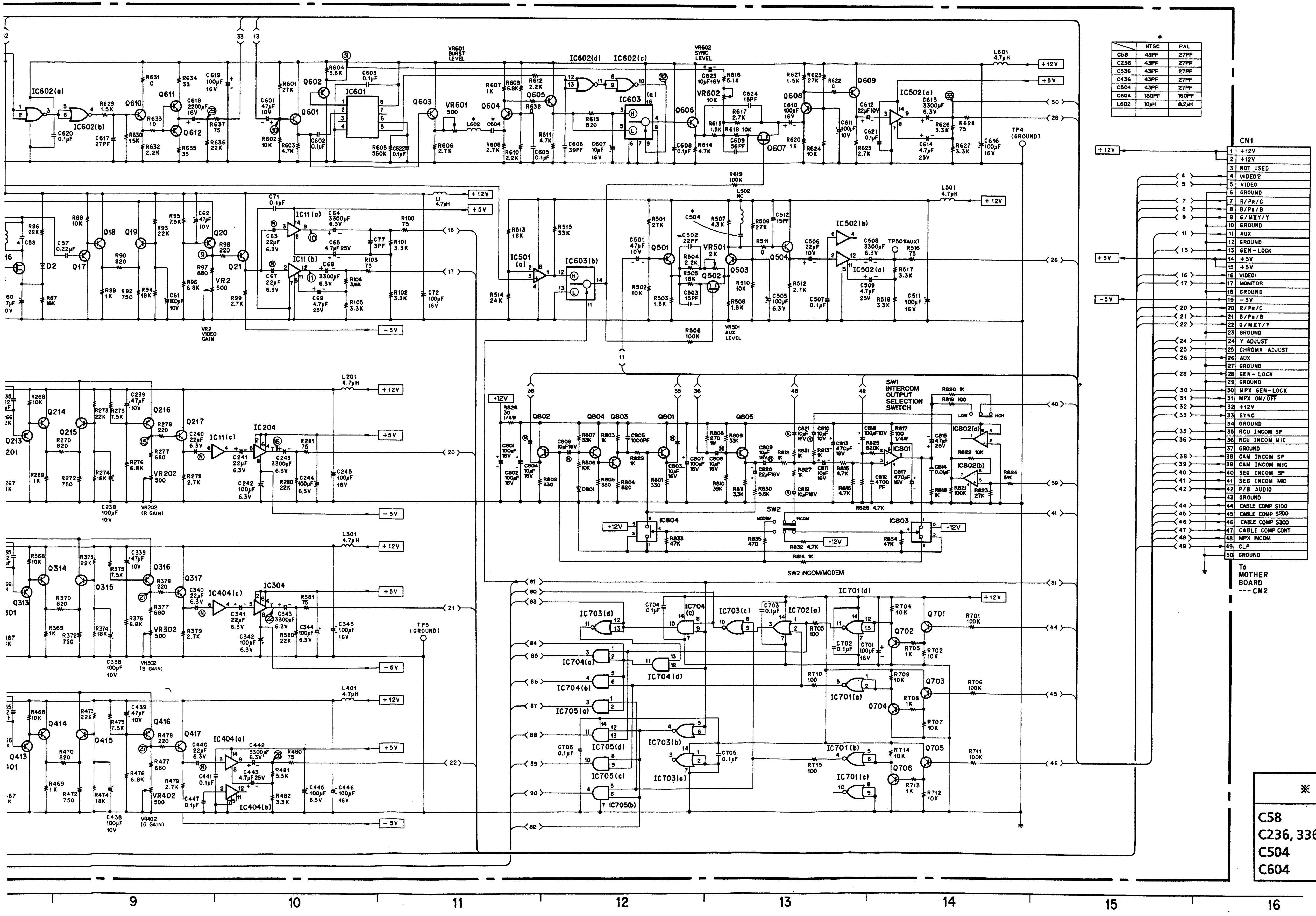
IC502	D13, E14
IC601	E10
IC602	E8, E9, E12
IC603	D12, E12
IC701	A13, B13
IC702	B13
IC703	A12, B12
IC704	B12
IC705	A12, B12
IC801	C13
IC802	C14
Q1	E2
Q2	E2
Q3	E3
Q4	E3
Q5	E3
Q6	D1
Q7	D2
Q8	D2
Q9	D2
Q10	D2
Q11	D3
Q12	D4
Q13	D5
Q14	D6
Q15	D6
Q16	D8
Q17	D9
Q18	D9
Q19	D9
Q20	D9
Q21	D10
Q22	E1
Q23	D3
Q24	D4
Q201	C1
Q202	C2
Q203	C2
Q204	C3
Q205	C3
Q206	C4
Q207	C4
Q208	C5
Q209	C6
Q210	C6
Q211	C6
Q212	C8
Q213	C8
Q214	C8
Q215	C9
Q216	C9
Q217	C9
Q301	B1
Q302	B2
Q303	B2
Q304	B3
Q305	B3
Q306	B4
Q307	B4
Q308	B5
Q309	B6
Q310	B6
Q311	B6
Q312	B8
Q313	B8
Q314	B8
Q315	B9
Q316	B9
Q317	B9
Q401	A1
Q402	A2
Q403	A2
Q404	A3
Q405	A3
Q406	A4
Q407	A4
Q408	A5
Q409	A6
Q410	A6
Q411	A6
Q412	A8
Q413	A8
Q414	A8
Q415	A9
Q416	A9
Q417	A9
Q418	B5
Q501	D12
Q502	D13
Q503	D13
Q504	D13
Q601	E10
Q602	E10
Q603	E11
Q604	E11
Q605	E12
Q606	E12
Q607	E13
Q608	E13
Q609	E13
Q610	E9
Q611	E9
Q612	E9
Q701	B14
Q702	B14
Q703	B14
Q704	B14
Q705	A14
Q706	A14
Q801	C12
Q802	C12
Q803	C12
Q804	C12
Q805	C13
Q901	E4
Q902	E5
Q903	E5
D1	E8
D2	D8
D201	C8
D301	B8
D401	A8
D801	C12

SCHEMATIC DIAGRAM OF


VIDEO BOARD
F
E
D
C
B
A
1
2
3
4
5
6
7
8
IC1(b)
IC1(a)
IC1(c)
IC2
IC3
IC4(a)
IC4(b)
IC4(c)
IC4(d)
IC5(a)
IC5(b)
IC6
IC7
IC8
IC9
IC10
IC602(a)
IC602(b)
IC201(a)
IC201(b)
IC202
IC203
IC301(a)
IC301(b)
IC302
IC303
IC401(a)
IC401(b)
IC402
IC403
TP1 (CABLE COMP CONTROL)
TP2 (VIDEO)
TP3 (VIDEO FREQ RESPONSE)
TP202 (R FREQ RESPONSE)
TP302 (B FREQ RESPONSE)
TP402 (G FREQ RESPONSE)
VR1 VIDEO FREQ RESPONSE
VR201 R FREQ RESPONSE
VR301 B FREQ RESPONSE
VR401 G FREQ RESPONSE

RAM OF VIDEO BOARD

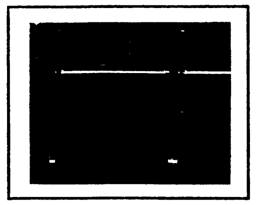

IC602(a)
IC602(b)
IC602(d)
IC602(c)
IC601
IC603(a)
IC502(c)
IC11(a)
IC11(b)
IC501(a)
IC603(b)
IC502(b)
IC502(a)
VR601 BURST LEVEL
VR602 SYNC LEVEL
VR2 VIDEO GAIN
VR501 AUX LEVEL
TP4 (GROUND)
TP5 (GROUND)
TP50(AUX)
IC11(c)
IC204
VR202 (R GAIN)
IC404(c)
IC304
VR302 (B GAIN)
IC404(a)
IC404(b)
VR402 (G GAIN)
SW1 INTERCOM OUTPUT SELECTION SWITCH
LOW
HIGH
IC802(a)
IC802(b)
IC801
IC804
IC803
SW2
MODEM
INCOM
SW2 INCOM/MODEM
IC701(d)
IC703(d)
IC704(c)
IC703(c)
IC702(a)
IC704(a)
IC704(d)
IC704(b)
IC705(a)
IC701(a)
IC705(d)
IC703(b)
IC705(c)
IC703(a)
IC705(b)
IC701(b)
IC701(c)
+12V
+5V
-5V
CN1
1 +12V
2 +12V
3 NOT USED
4 VIDEO2
5 VIDEO
6 GROUND
7 R/PR/C
8 B/PB/B
9 G/MIIY/Y
10 GROUND
11 AUX
12 GROUND
13 GEN-LOCK
14 +5V
15 +5V
16 VIDEO1
17 MONITOR
18 GROUND
19 -5V
20 R/PR/C
21 B/PB/B
22 G/MIIY/Y
23 GROUND
24 Y ADJUST
25 CHROMA ADJUST
26 AUX
27 GROUND
28 GEN-LOCK
29 GROUND
30 MPX GEN-LOCK
31 MPX ON/OFF
32 +12V
33 SYNC
34 GROUND
35 RCU INCOM SP
36 RCU INCOM MIC
37 GROUND
38 CAM INCOM SP
39 CAM INCOM MIC
40 SEG INCOM SP
41 SEG INCOM MIC
42 P/B AUDIO
43 GROUND
44 CABLE COMP S100
45 CABLE COMP S200
46 CABLE COMP S300
47 CABLE COMP CONT
48 MPX INCOM
49 CLP
50 GROUND
To MOTHER BOARD ---CN2
9
10
11
12
13
14
15
16

*

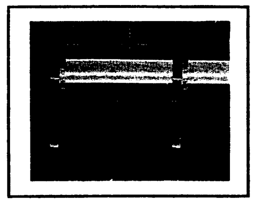
	NTSC	PAL
C58	43PF	27PF
C236	43PF	27PF
C336	43PF	27PF
C436	43PF	27PF
C504	43PF	27PF
C604	180PF	150PF
L602	10μH	8.2μH

※	NTSC	PAL
C58 C236, 336, 436 C504 C604	43 pF 43 pF 43 pF 180 pF	27 pF 27 pF 27 pF 150 pF

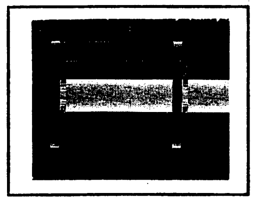
1. 10µss/DIV 0.2V/DIV



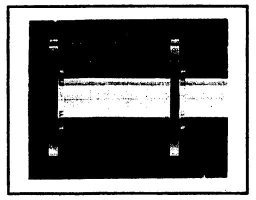
2. 10µs/DIV 50mV/DIV



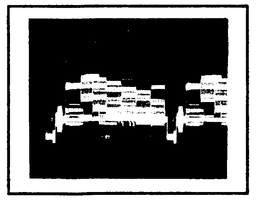
3. 10µs/DIV 50mV/DIV



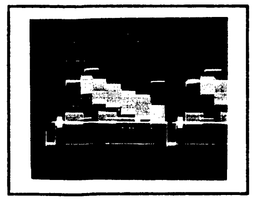
4. 10µs/DIV 0.2V/DIV



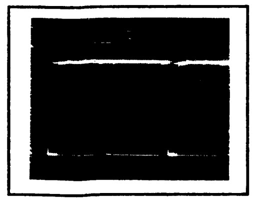
5. 10µs/DIV 0.5V/DIV



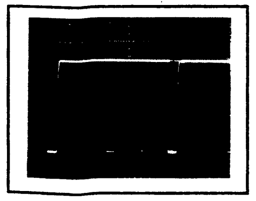
6. 10µs/DIV 0.5V/DIV



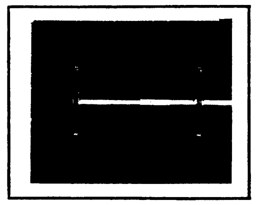
7. 10µsDIV /1V/DIV



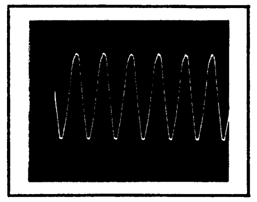
8. 10µs/DIV 1V/DIV



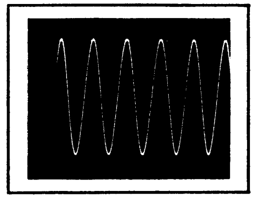
9. 10µs/DIV 50mV/DIV



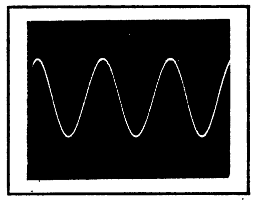
10. 0.2µs/DIV 0.1V/DIV



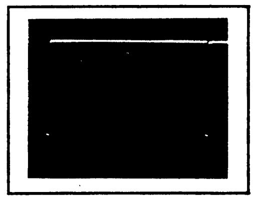
11. 20nµs/DIV 0.1V/DIV



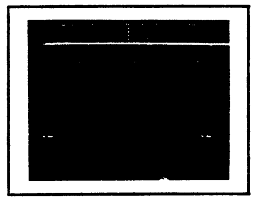
12. 20nµs/DIV 0.2V/DIV



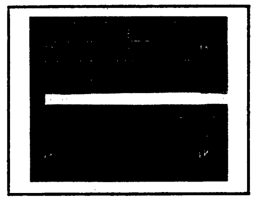
13. 2ms/DIV 1V/DIV



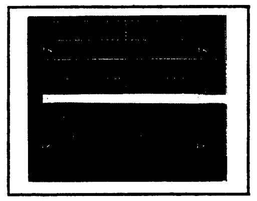
14. 2ms/DIV 1V/DIV



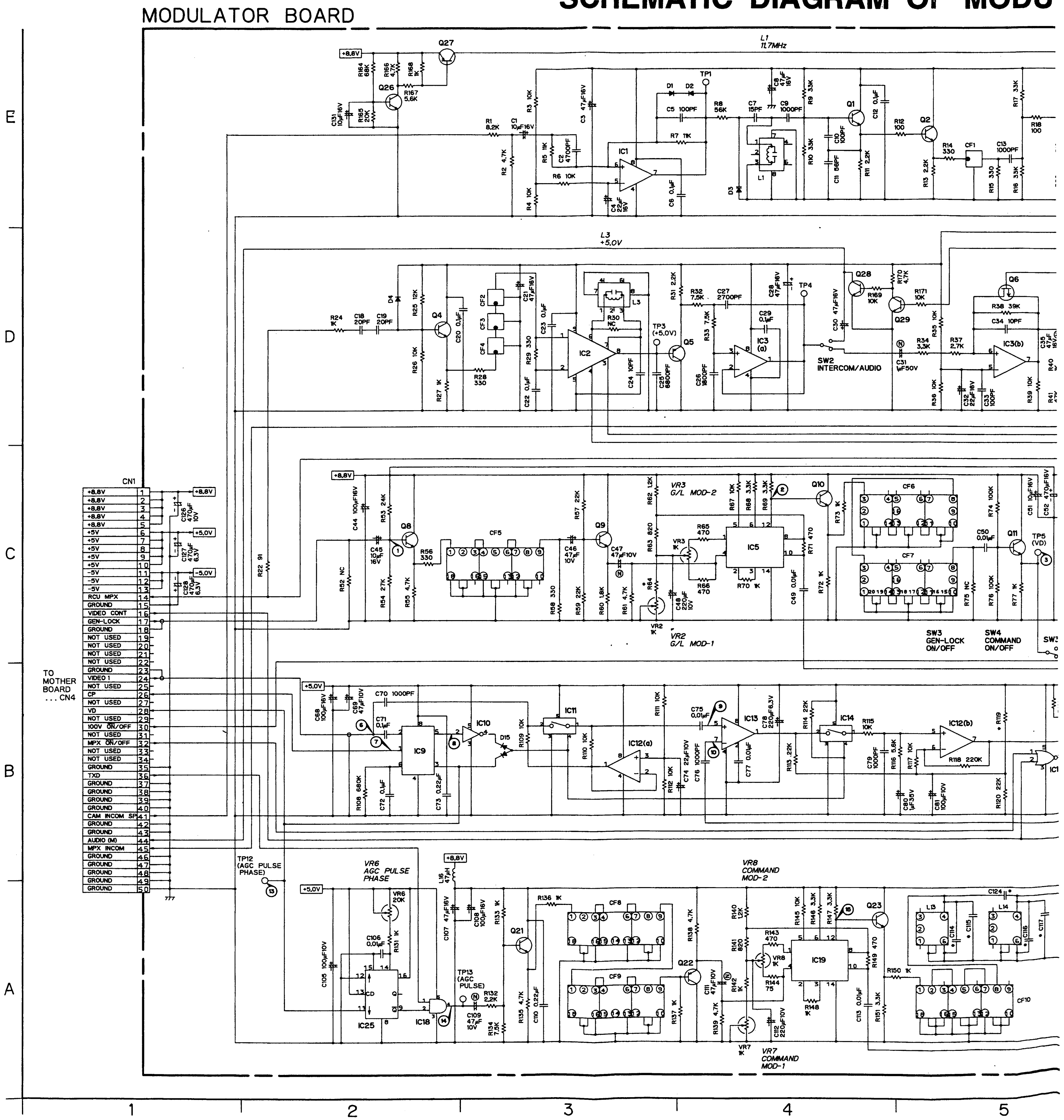
15. 2ms/DIV 0.1V/DIV



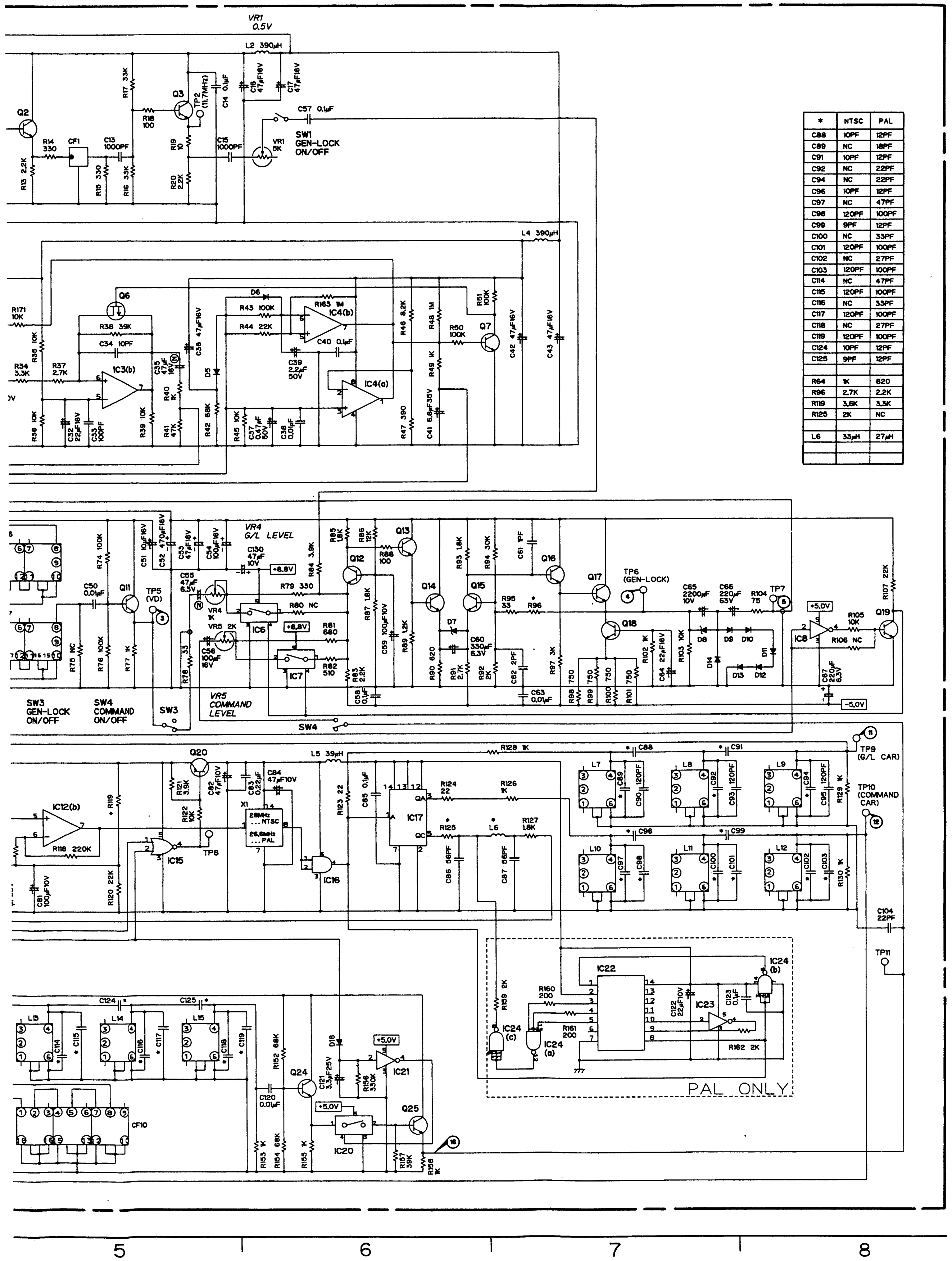
16 2ms/DIV 50mV/DIV



SCHEMATIC DIAGRAM OF MODU


MODULATOR BOARD
E
D
C
B
A
1
2
3
4
5
CN1
TO MOTHER BOARD ...CN4
1 +8.8V
2 +8.8V
3 +8.8V
4 +8.8V
5 +8.8V
6 +5V
7 +5V
8 +5V
9 +5V
10 -5V
11 -5V
12 -5V
13 -5V
14 RCU MPX
15 GROUND
16 VIDEO CONT
17 GEN-LOCK
18 GROUND
19 NOT USED
20 NOT USED
21 NOT USED
22 NOT USED
23 GROUND
24 VIDEO 1
25 NOT USED
26 CP
27 NOT USED
28 VD
29 NOT USED
30 100V ON/OFF
31 NOT USED
32 MPX ON/OFF
33 NOT USED
34 NOT USED
35 GROUND
36 TXD
37 GROUND
38 GROUND
39 GROUND
40 GROUND
41 CAM INCOM SP
42 GROUND
43 GROUND
44 AUDIO (M)
45 MPX INCOM
46 GROUND
47 GROUND
48 GROUND
49 GROUND
50 GROUND
L1 11.7MHz
L3 +5.0V
TP1
TP3 (+5.0V)
TP4
TP5 (VD)
TP12 (AGC PULSE PHASE)
TP13 (AGC PULSE)
SW2 INTERCOM/AUDIO
SW3 GEN-LOCK ON/OFF
SW4 COMMAND ON/OFF
VR2 G/L MOD-1
VR3 G/L MOD-2
VR6 AGC PULSE PHASE
VR7 COMMAND MOD-1
VR8 COMMAND MOD-2
IC1
IC2
IC3(a)
IC3(b)
IC5
IC9
IC10
IC11
IC12(a)
IC12(b)
IC13
IC14
IC18
IC19
IC25
CF1
CF2
CF3
CF4
CF5
CF6
CF7
CF8
CF9
CF10
Q1
Q2
Q4
Q5
Q6
Q8
Q9
Q10
Q11
Q21
Q22
Q23
Q26
Q27
Q28
Q29

OF MODULATOR BOARD


VR1
0.5V
L2 390μH
Q2
Q3
R14 330
CF1
C13 1000PF
R13 2.2K
R15 330
R16 3.3K
R17 3.3K
R18 100
R19 10
R20 2.2K
C14 0.1μF
C15 1000PF
C57 0.1μF
SW1
GEN-LOCK
ON/OFF
VR1 5K
L4 390μH
Q6
R171 10K
R38 39K
C34 10PF
IC3(b)
R34 3.3K
R37 2.7K
R36 10K
R39 10K
R40 1K
R41 47K
R42 68K
D5
D6
R43 100K
R44 22K
R163 1M
IC4(b)
C40 0.1μF
C39 22μF 50V
IC4(a)
R45 10K
R47 390
R48 1M
R49 1K
R50 100K
R51 10K
Q7
C41 6.8μF35V
C42 47μF16V
C43 47μF16V
VR4
G/L LEVEL
C130 47μF 10V
+8.8V
R79 330
R80 NC
R81 680
R82 510
R83 2.2K
IC6
IC7
VR5 2K
C56 100μF 16V
C50 0.01μF
Q11
TP5 (VD)
R74 100K
R75 NC
R76 100K
R77 1K
R78 33
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
R85 1.8K
R86 12K
R88 100
R87 1.8K
R89 1.2K
R90 820
R91 2.7K
R92 2K
R93 1.8K
R94 30K
R95 33
R96
C60 330μF 6.3V
C61 1PF
C62 2PF
C63 0.01μF
C58 0.1μF
C59 100μF10V
TP6 (GEN-LOCK)
C65 2200μF 10V
C66 220μF 63V
R104 75
TP7
D7
D8
D9
D10
D11
D12
D13
D14
R98 750
R99 750
R100 750
R101 750
R102 1K
R103 10K
C64 22μF16V
+5.0V
IC8
R105 10K
R106 NC
R107 22K
C67 220μF 6.3V
-5.0V
SW3
GEN-LOCK
ON/OFF
SW4
COMMAND
ON/OFF
VR5
COMMAND
LEVEL
SW3
SW4
Q20
R121 3.3K
R122 1K
C82 47μF10V
C83 0.22μF
C84 47μF10V
X1
28MHz ...NTSC
26.6MHz ...PAL
L5 39μH
R123 22
C85 0.1μF
IC17
R124 22
R125
R126 1K
L6
R127 1.8K
C86 56PF
C87 56PF
R128 1K
C88
C89
C90 120PF
C91
C92
C93 120PF
C94
C95 120PF
C96
C97
C98
C99
C100
C101
C102
C103
L7
L8
L9
L10
L11
L12
R129 1K
R130 1K
TP9 (G/L CAR)
TP10 (COMMAND CAR)
C104 22PF
TP11
IC12(b)
R118 220K
R119
R120 22K
C81 100μF10V
IC15
TP8
IC16
IC22
R159 2K
R160 200
R161 200
R162 2K
IC24 (c)
IC24 (a)
IC24 (b)
IC23
C122 22μF10V
C123 0.1μF
PAL ONLY
C124
C125
L13
L14
L15
C114
C115
C116
C117
C118
C119
CF10
R152 68K
R153 1K
R154 68K
R155 1K
D16
Q24
C120 0.01μF
C121 3.3μF25V
+5.0V
IC21
R156 330K
IC20
Q25
R157 39K
R158 1K
5
6
7
8

*	NTSC	PAL
C88	10PF	12PF
C89	NC	18PF
C91	10PF	12PF
C92	NC	22PF
C94	NC	22PF
C96	10PF	12PF
C97	NC	47PF
C98	120PF	100PF
C99	9PF	12PF
C100	NC	33PF
C101	120PF	100PF
C102	NC	27PF
C103	120PF	100PF
C114	NC	47PF
C115	120PF	100PF
C116	NC	33PF
C117	120PF	100PF
C118	NC	27PF
C119	120PF	100PF
C124	10PF	12PF
C125	9PF	12PF
R64	1K	820
R96	2.7K	2.2K
R119	3.6K	3.3K
R125	2K	NC
L6	33μH	27μH

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MODULATOR BOARD

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IC3	D4, D5
IC4	D6
IC5	C4
IC6	C6
IC7	C6
IC8	C8
IC9	B2
IC10	B3
IC11	B3
IC12	B3, B5
IC13	B4
IC14	B4
IC15	B5
IC16	B6
IC17	B6
IC18	A2
IC19	A4
IC20	A6
IC21	A6
IC22	A7, B7
IC23	A7
IC24	A7, A8
IC25	A2
Q1	E4
Q2	E5
Q3	E5
Q4	D2
Q5	D4
Q6	D5
Q7	D7
Q8	C2
Q9	C3
Q10	C4
Q11	C5
Q12	C6
Q13	C6
Q14	C6
Q15	C6
Q16	C7
Q17	C7
Q18	C7
Q19	C8
Q20	B5
Q21	A3
Q22	A4
Q23	A4
Q24	A6
Q25	A6
Q26	E2
Q27	E3
Q28	D4
Q29	D5
D1	E3
D2	E4
D3	E4
D4	D2
D5	D5
D6	D6
D7	D6
D8	C7
D9	C7
D10	C8
D11	C8
D12	C8
D13	C8
D14	C7
D15	B3
D16	A6

Modulator Board
< Voltage >

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10
Pin 1	8.2	1.9	5.3	0	2.6	1.7	1.7	0	4.6	0
2	-	1.9	5.3	0.4	1.9	0	1.7	0	2.4	4.6
3	-	0.1	5.3	0.1	1.6	0	0	0	4.9	0
4	0	0	0	0	2.3	0	8.8	0	0	0.4
5	4.3	0	4.4	0.3	1.1	8.8	8.8	5.0	4.6	5.0
6	4.4	3.9	4.4	0.1	6.2				1.2	
7	4.4	3.9	4.4	0	0				2.5	
8	8.7	4.6	8.7	8.7	5.1				5.0	
9		8.7			0					
10					5.9					
11					0					
12					0					

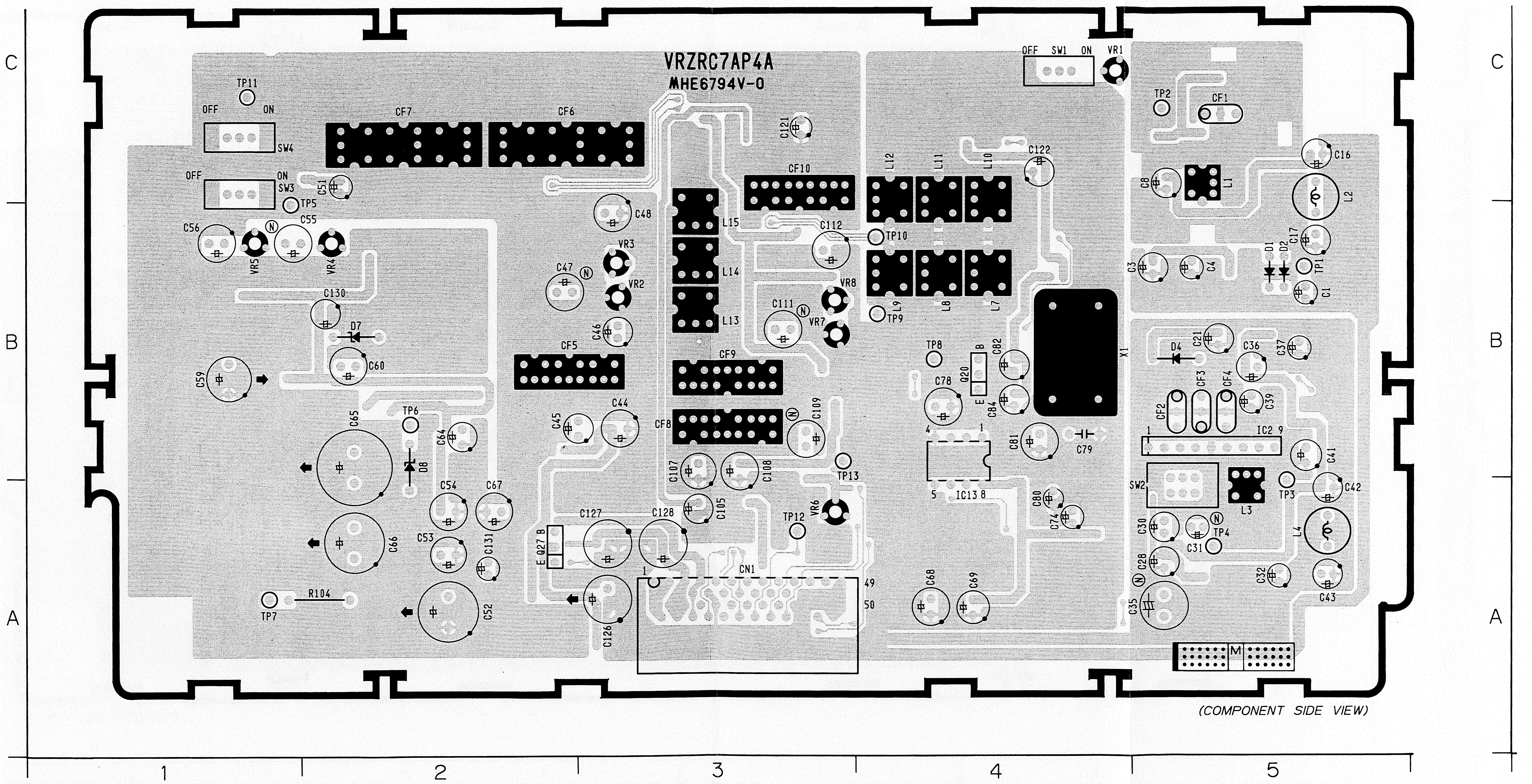
	IC11	IC12	IC13	IC14	IC15	IC16	IC17	IC18	IC19	IC20
Pin 1	2.5	2.5	4.2	4.2	0	1.4	3.1	5.0	2.5	3.3
2	2.5	2.5	2.5	4.2	0	1.4	0	4.9	1.8	3.3
3	0	2.5	1.8	0	0	0	1.9	0	1.8	0
4	0.8	0	0	0.8	0.1	3.2	4.7	5.0	2.5	5.0
5	5.0	4.2	1.8	5.0	5.0	4.9	1.0	0	1.1	5.0
6		4.2	2.5				1.6		0	
7		2.7	2.5				0		0	
8		5.0	5.0				0		5.1	
9							0		0	
10							0		5.1	
11							0		0	
12							4.9		5.1	
13							4.9		0	
14							4.9		6.0	
15									0	
16									0	

	IC21	IC22	IC23	IC24	IC25
Pin 1	0	2.5	-1.4	3.8	0
2	0	4.8	0.5	2.9	0.1
3	0	3.6	0	2.3	0
4	5.0	2.6	3.4	2.3	0
5	5.0	2.1	4.8	2.3	0
6		1.3		2.5	0
7		0		0	5.0
8		2.3		2.2	0
9		2.2		2.5	4.9
10		0.5		2.5	0
11		0		2.5	4.9
12		0		2.5	0
13		0		2.1	5.0
14		4.8		4.8	4.9
15					0
16					5.0

	B	C	E
Q1	4.0	8.7	3.4
Q2	3.4	8.7	6.2
Q3	4.1	8.7	3.6
Q4	3.8	8.7	3.1
Q5	4.7	0	5.3
Q6	(G) 4.4	(D) 5.0	(S) 4.4
Q7	0	5.0	0
Q8	4.4	8.8	3.7
Q9	4.3	8.8	3.7
Q10	5.9	8.8	5.1
Q11	3.1	8.8	0
Q12	2.4	5.7	1.7
Q13	5.7	8.8	4.9
Q14	5.7	8.8	5.0
Q15	3.4	6.1	2.7
Q16	6.1	8.8	5.4
Q17	5.4	8.8	4.7
Q18	2.7	4.7	1.9
Q19	0	8.8	0
Q20	4.3	4.9	5.0
Q21	7.7	8.7	7.0
Q22	3.4	0	4.2
Q23	6.0	8.7	5.2
Q24	4.0	8.8	3.3
Q25	3.3	8.7	2.7
Q26	0.7	0.1	0
Q27	8.1	8.7	8.8
Q28	0.7	0	0.7
Q29	0	6.1	0

CONDUCTOR VIEW OF MODULATOR BOARD (COMPONENT SIDE)

MODULATOR BOARD



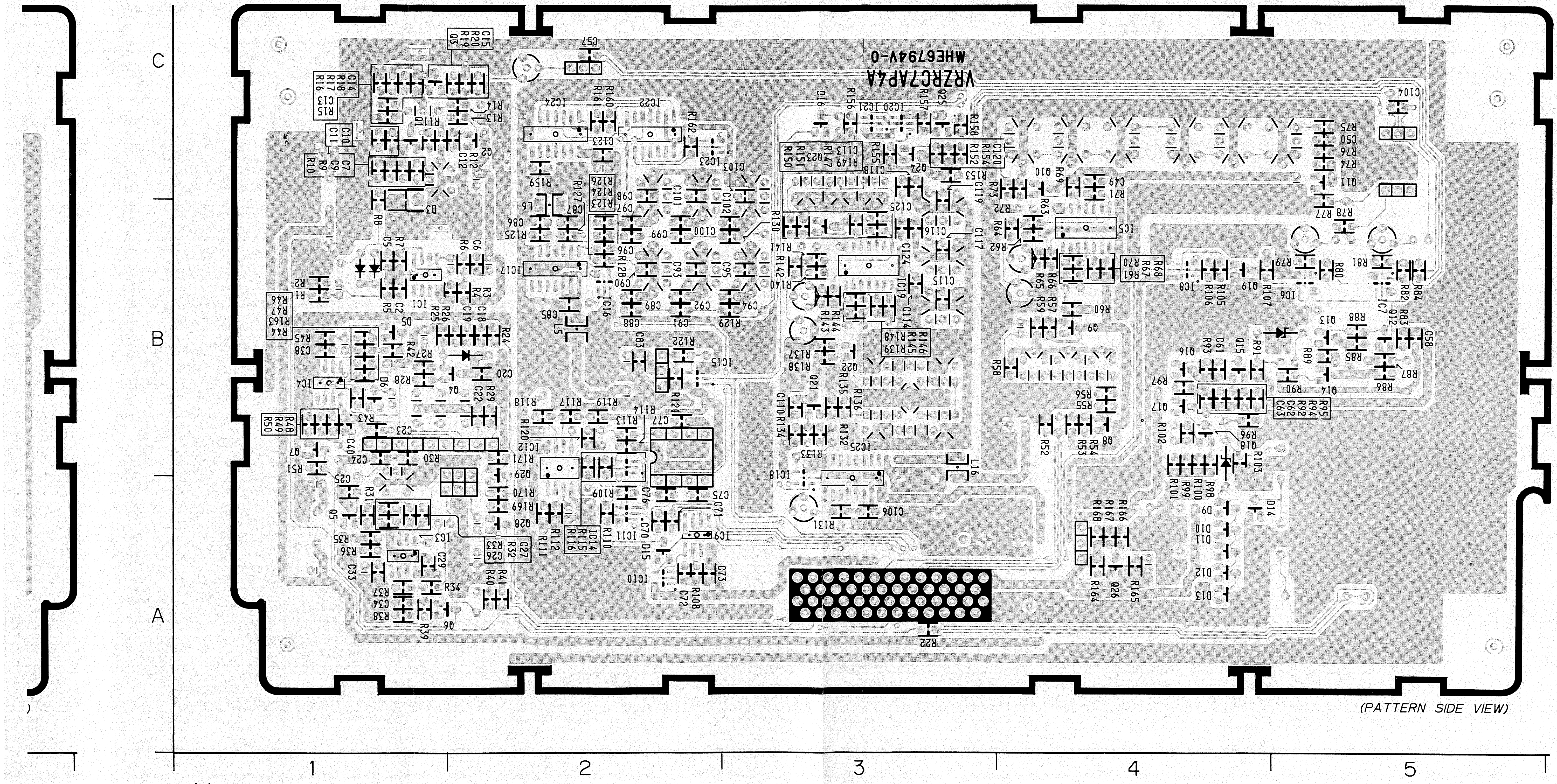
C
B
A
1
2
3
4
5
VRZRC7AP4A
MHE6794V-0
TP11
OFF
ON
SW4
SW3
TP5
C51
C56
C55
VR5
VR4
CF7
CF6
C48
VR3
C47
VR2
C46
CF5
C130
D7
C60
C59
C65
TP6
C64
D8
C54
C67
C66
C53
C131
C52
R104
TP7
C45
C44
CF8
Q27
E
B
C127
C128
C126
CN1
1
49
50
C121
CF10
L15
L14
L13
CF9
C112
TP10
VR8
C111
VR7
C109
C107
C108
TP13
C105
VR6
TP12
L12
L11
L10
C122
L9
L8
L7
TP9
SW1
VR1
X1
TP8
Q20
C82
C84
C78
C81
C79
IC13
4
1
5
8
C80
C74
C68
C69
TP2
CF1
C16
C8
L1
L2
C17
D1
D2
TP1
C1
C3
C4
D4
C21
C36
C37
CF3
CF4
CF2
C39
IC2
9
C41
SW2
L3
TP3
C42
C30
C31
TP4
L4
C28
C32
C43
C35
M
N
(COMPONENT SIDE VIEW)

< Index >
MODULATOR BOARD
COMPONENT SIDE

IC2	B5
IC13	B4
Q20	B4
Q27	A2
D1	B5
D2	B5
D4	B5
D7	B2
D8	B2

CONDUCTOR VIEW OF MODULATOR BOARD (PATTERN SIDE)

MODULATOR BOARD



(PATTERN SIDE VIEW)

< Index >
MODULATOR BOARD
PATTERN SIDE

IC1	B1
IC3	A1
IC4	B1
IC5	B4
IC6	B5
IC7	B5
IC8	B4
IC9	A2
IC10	A2
IC11	A2
IC12	B2
IC14	B2
IC15	B2
IC16	B2
IC17	B2
IC18	A3
IC19	B3
IC20	C3
IC21	C3
IC25	B3
Q1	C1
Q2	C2
Q3	C1
Q4	B2
Q5	A1
Q6	A1
Q7	B1
Q8	B4
Q9	B4
Q10	C4
Q11	C5
Q12	B5
Q13	B5
Q14	B5
Q15	B4
Q16	B4
Q17	B4
Q18	B4
Q19	B4
Q21	B3
Q22	B3
Q23	B3
Q24	C3
Q25	C3
Q26	A4
Q28	A2
Q29	B2
D3	B1
D5	B1
D5	B1
D9	A4
D10	A4
D11	A4
D12	A4
D13	A4
D14	A4
D15	A2
D16	C3

SCHEMATIC DIAGRAM OF DEMOI

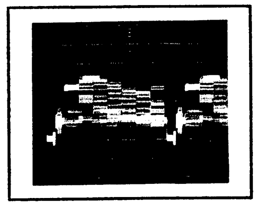
(Voltages)

	IC1	IC2	IC3	IC4	IC5	IC6	IC7
Pin 1	3.0	0	4.6	4.8	0.2	5.0	5.0
2	3.0	0	4.9	4.1	3.0	5.0	4.9
3	0	0	0.4	0	2.6	4.0	0
4	7.6	7.6	4.9	6.4	0	4.0	4.9
5	8.8	8.6	0.1	6.5	2.6	5.0	5.0
6			0.1	8.8	0.2	5.0	
7			0	4.1	5.9	5.0	
8			4.9	4.8	8.8	0	
9			4.9			0	
10			0.1			0	
11			5.0			0	
12			0			0	
13			0			0	
14			5.0			0	
15						0	
16						0	

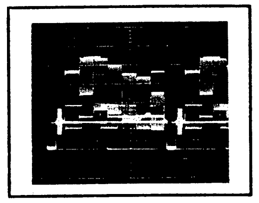
	IC8	IC9	IC10	IC11	IC12	IC13	IC14
Pin 1	4.0	0	4.9	0	1.8	8.3	2.7
2	5.0	4.9	5.0	0	3.6	1.3	1.1
3	5.0	5.0	5.0	0	3.6	1.5	2.7
4	4.9	0	5.0	0	0	0	1.1
5	0	4.9	0	0	0	2.0	1.1
6	0	0.1	0	0	0	2.0	0
7	5.0	4.9	0.1	0	7.4	8.8	4.8
8	0	0	0	0	8.8		0
9	0.1	0	0	0			0
10	5.0	5.0	0	0			0
11	5.0	0	0	5.0			0
12	5.0	0	5.0	5.0			1.1
13	0.1	0	0	5.0			2.7
14	0	5.0	0	5.0			1.1
15	4.6	0	4.8				1.1
16	5.0	5.0	5.0				8.8

	B	C	E
Q1	7.4	8.8	6.8
2	6.4	8.8	5.8
3	5.5	8.8	4.8
4	3.9	8.8	3.2
5	3.6	7.4	2.9
6	7.4	8.8	6.7
7	1.8	0.1	2.2
8	2.2	0	2.9
9	2.9	8.8	2.3
10	2.8	8.8	2.1
11	4.4	8.8	3.7
12	4.1	3.8	4.1
13	3.3	5.9	2.5
14	5.9	8.8	5.1
15	2.5	8.8	1.8
16	7.1	5.0	7.8
17	7.1	5.0	7.8
18	7.6	8.8	6.9
19	5.0	8.8	4.3
20	2.1	0	2.8
21	2.8	4.5	0
22	4.5	8.8	3.8
23	4.4	6.4	3.6
24	6.3	8.8	5.7
25	6.4	0	5.7
26	3.6	8.8	2.0
27	0	3.4	1.1
28	1.8	8.8	0
29	3.4	8.8	2.7
30	0.6	0	0
31	6.7	8.8	6.0
32	6.0	8.8	5.4
33	5.7	6.8	5.2
34	6.8	8.8	6.2

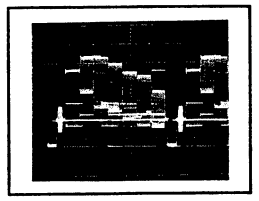
1. 10 µs/DIV 0.5VDIV



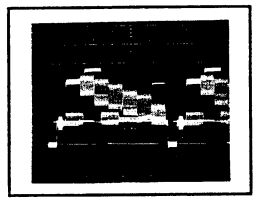
2. 10µs/DIV 0.2V/DIV



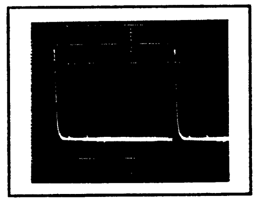
3. 10µs/DIV 0.2V/DIV



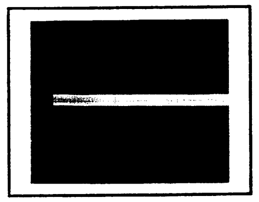
4. 10µsDIV /0.5V/DIV



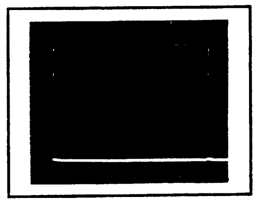
5. 10µs/DIV 0.5V/DIV



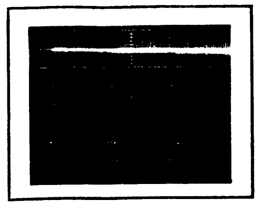
6. 5ms/DIV 50mV/DIV



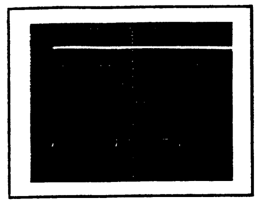
7. 2ms/DIV 0.1V/DIV



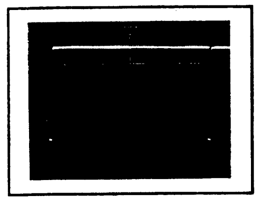
8. 5ms/DIV 1V/DIV



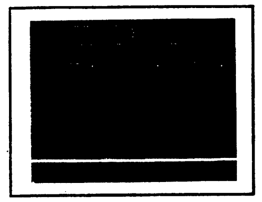
9. 5ms/DIV 0.2V/DIV



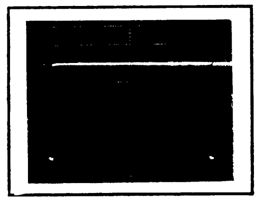
10. 5ms/DIV 1V/DIV



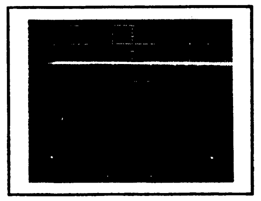
11. 5ms/DIV 1V/DIV



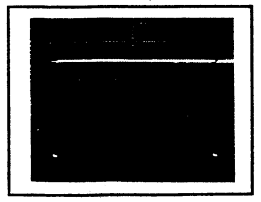
12. 2ms/DIV 1V/DIV



13. 2ms/DIV 1V/DIV

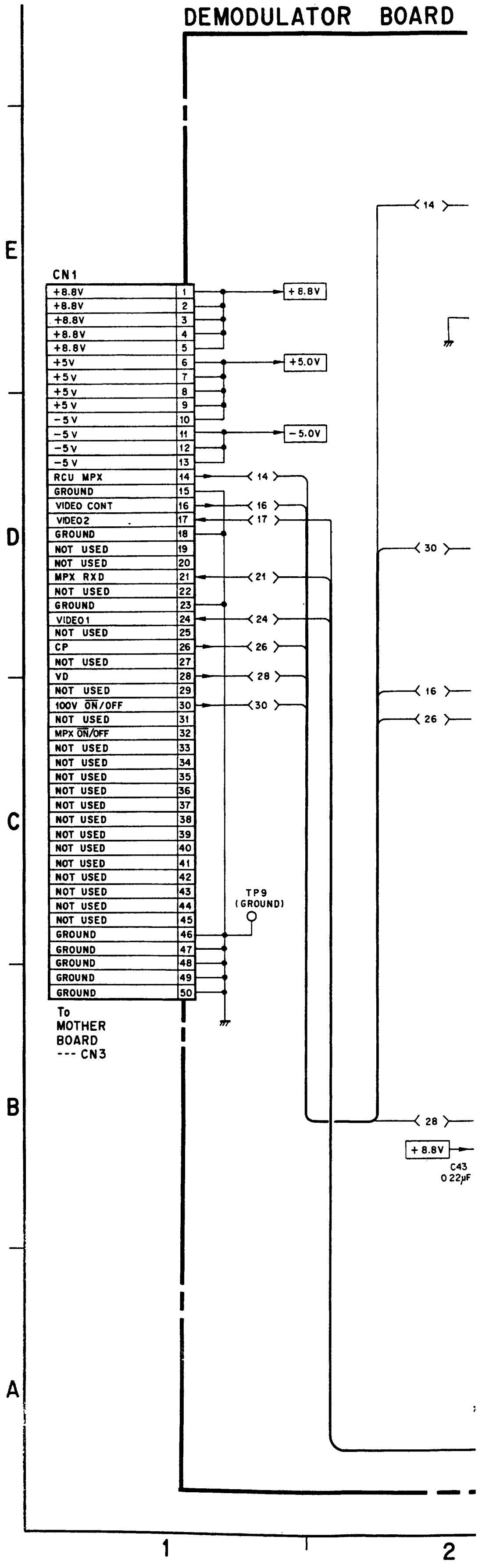


14. 2ms/DIV 1V/DIV



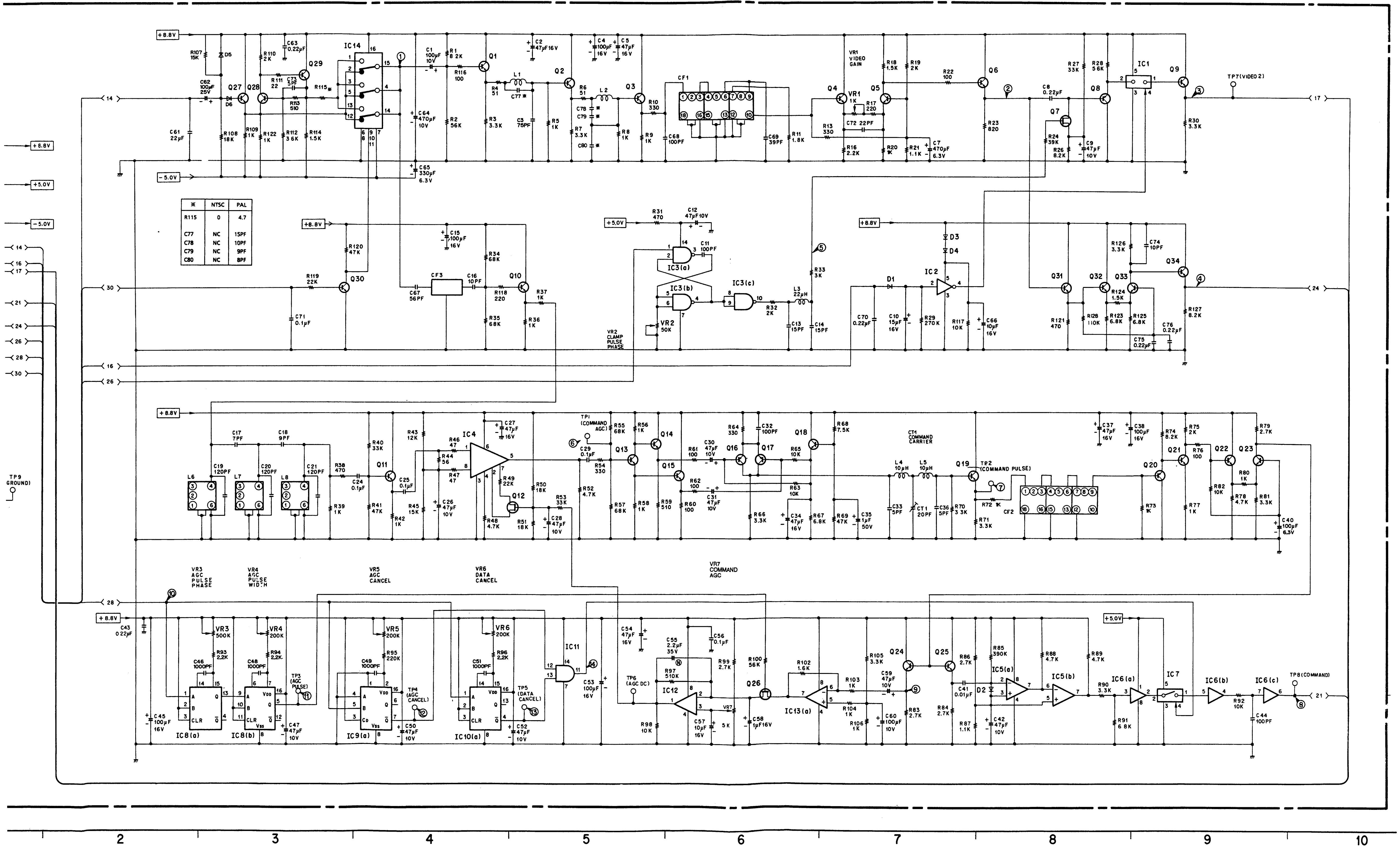
⟨Index⟩
DEMODULATOR BOARD

IC1	E8
IC2	D7
IC3	D6
IC4	C4
IC5	A8
IC6	A9
IC7	A9
IC8	A3
IC9	A4
IC10	A4
IC11	A5
IC12	A6
IC13	A6
IC14	E4
Q1	E4
Q2	E5
Q3	E5
Q4	E7
Q5	E7
Q6	E7
Q7	E8
Q8	E8
Q9	E9
Q10	D5
Q11	C4
Q12	C4
Q13	C5
Q14	C5
Q15	C6
Q16	C6
Q17	C6
Q18	C6
Q19	C7
Q20	C9
Q21	C9
Q22	C9
Q23	C9
Q24	B7
Q25	B7
Q26	A6
Q27	E3
Q28	E3
Q29	E3
Q30	D3
Q31	D8
Q32	D8
Q33	D8
Q34	D9
D1	D7
D2	A8
D3	D7
D4	D7
D5	E3


DEMODULATOR BOARD
E
D
C
B
A
1
2
CN1
+8.8V 1
+8.8V 2
+8.8V 3
+8.8V 4
+8.8V 5
+5V 6
+5V 7
+5V 8
+5V 9
−5V 10
−5V 11
−5V 12
−5V 13
RCU MPX 14
GROUND 15
VIDEO CONT 16
VIDEO2 17
GROUND 18
NOT USED 19
NOT USED 20
MPX RXD 21
NOT USED 22
GROUND 23
VIDEO1 24
NOT USED 25
CP 26
NOT USED 27
VD 28
NOT USED 29
100V ON/OFF 30
NOT USED 31
MPX ON/OFF 32
NOT USED 33
NOT USED 34
NOT USED 35
NOT USED 36
NOT USED 37
NOT USED 38
NOT USED 39
NOT USED 40
NOT USED 41
NOT USED 42
NOT USED 43
NOT USED 44
NOT USED 45
GROUND 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
+8.8V
+5.0V
−5.0V
14
16
17
21
24
26
28
30
TP9 (GROUND)
To MOTHER BOARD --- CN3
C43 0.22µF

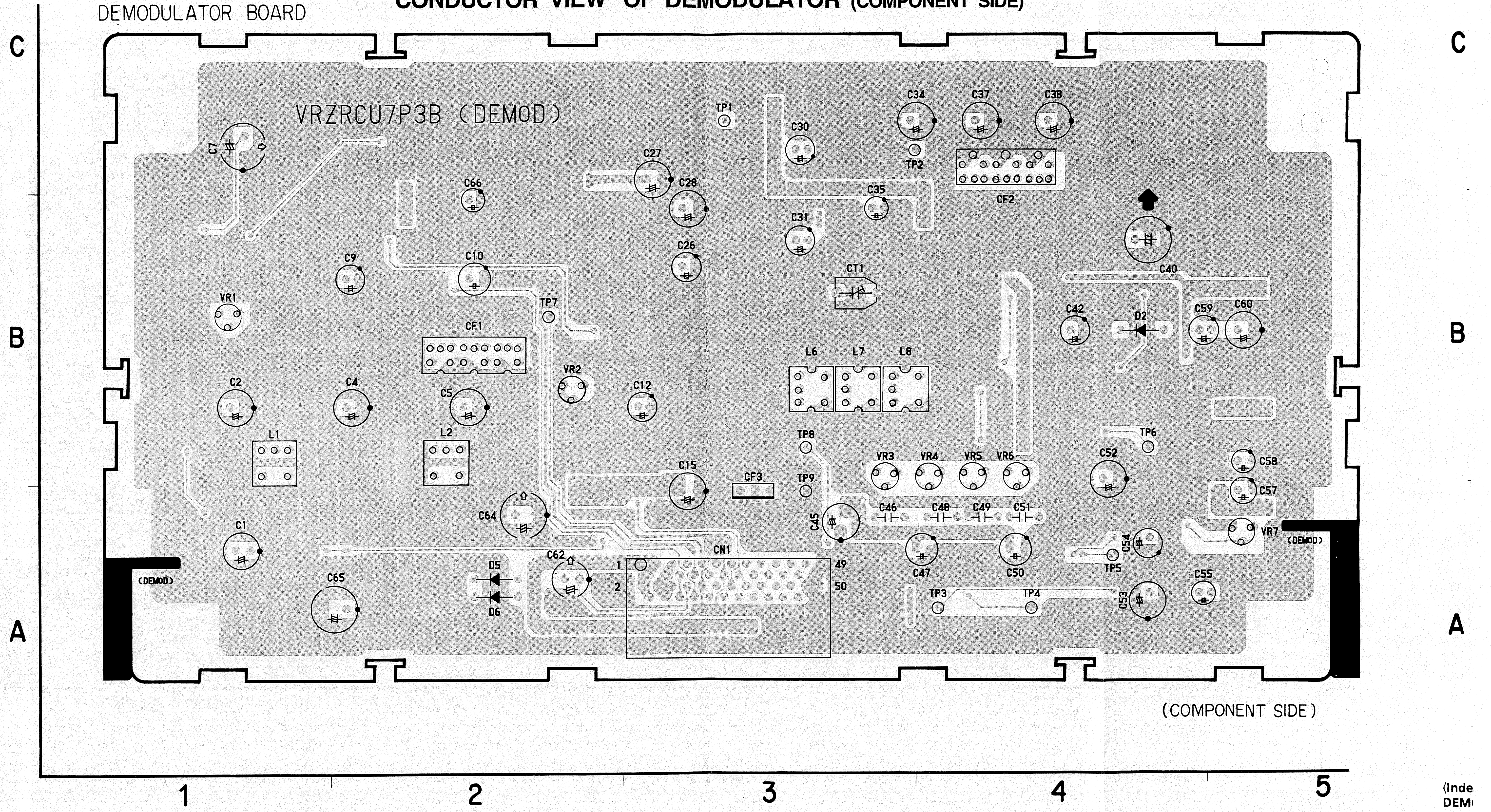
OF DEMODULATOR BOARD

ODULATOR BOARD


+8.8V
+5.0V
-5.0V
IC14
IC1
IC2
IC3(a)
IC3(b)
IC3(c)
IC4
IC5(a)
IC5(b)
IC6(a)
IC6(b)
IC6(c)
IC7
IC8(a)
IC8(b)
IC9(a)
IC10(a)
IC11
IC12
IC13(a)
CF1
CF2
CF3
CT1 COMMAND CARRIER
VR1 VIDEO GAIN
VR2 CLAMP PULSE PHASE
VR3 AGC PULSE PHASE
VR4 AGC PULSE WIDTH
VR5 AGC CANCEL
VR6 DATA CANCEL
VR7 COMMAND AGC
TP1 (COMMAND AGC)
TP2 (COMMAND PULSE)
TP3 (AGC PULSE)
TP4 (AGC CANCEL)
TP5 (DATA CANCEL)
TP6 (AGC DC)
TP7 (VIDEO 2)
TP8 (COMMAND)
TP9 GROUND)
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26
Q27
Q28
Q29
Q30
Q31
Q32
Q33
Q34
D1
D2
D3
D4
D5
D6
L1
L2
L3 22μH
L4 10μH
L5 10μH
L6
L7
L8
14
16
17
21
24
26
28
30
2
3
4
5
6
7
8
9
10

※	NTSC	PAL
R115	0	4.7
C77	NC	15PF
C78	NC	10PF
C79	NC	9PF
C80	NC	8PF

CONDUCTOR VIEW OF DEMODULATOR (COMPONENT SIDE)


DEMODULATOR BOARD
VRZRCU7P3B (DEMOD)
C
B
A
1
2
3
4
5
C7
C66
C27
C28
C26
TP1
C30
TP2
C34
C37
C38
CF2
C35
C31
CT1
C40
C9
C10
VR1
TP7
CF1
VR2
C42
D2
C59
C60
L6
L7
L8
C2
C4
C5
C12
L1
L2
TP8
TP6
C52
C58
C57
VR3
VR4
VR5
VR6
C15
CF3
TP9
C46
C48
C49
C51
C45
C64
VR7
(DEMOD)
C1
C62
CN1
1
2
49
50
C47
C50
C54
TP5
C55
D5
D6
C65
TP3
TP4
C53
(DEMOD)
(COMPONENT SIDE)

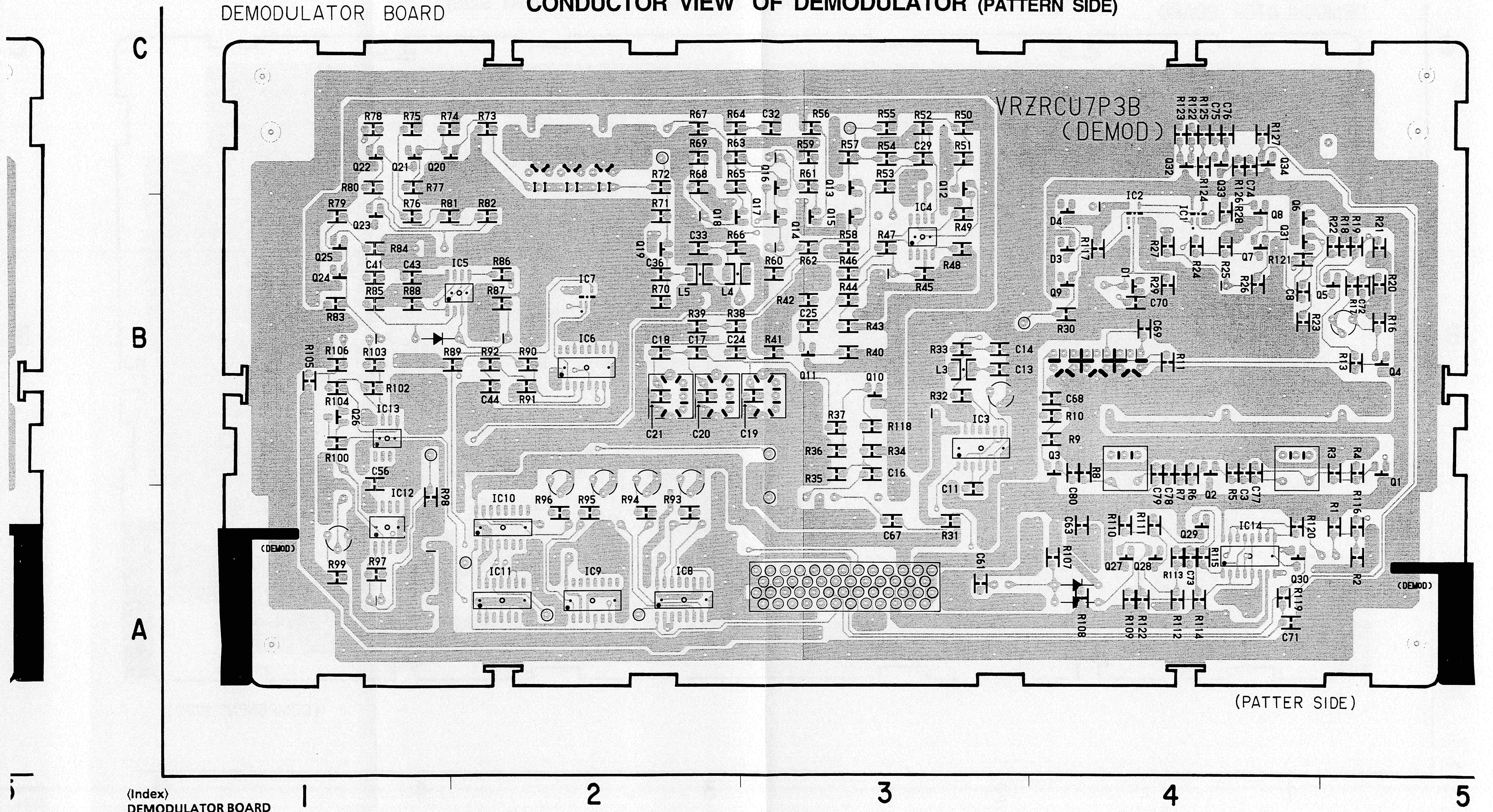
(Index)
DEMODULATOR BOARD
(COMPONENT SIDE)

D2	B4
D5	A2

(Inde
DEM
(PAT

IC1
IC2
IC3
IC4
IC5

CONDUCTOR VIEW OF DEMODULATOR (PATTERN SIDE)

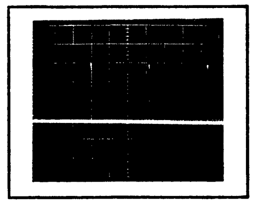

DEMODULATOR BOARD
VRZRCU7P3B
(DEMOD)
(DEMOD)
(DEMOD)
(PATTER SIDE)
C
B
A
1
2
3
4
5

(Index)
DEMODULATOR BOARD
(PATTERN SIDE)

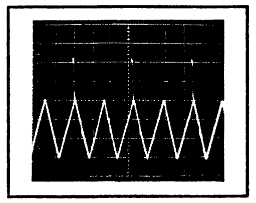
IC1	B4	IC6	B2	IC11	A2	Q2	B4	Q7	B4	Q12	C3	Q17	B3	Q22	C1	Q27	A4	D1	B4
IC2	B4	IC7	B2	IC12	A1	Q3	B4	Q8	B4	Q13	C3	Q18	B2	Q23	B1	Q28	A4	D3	B4
IC3	B3	IC8	A2	IC13	B1	Q4	B5	Q9	B4	Q14	B3	Q19	B2	Q24	B1	Q29	A4	D4	B4
IC4	B3	IC9	A2	IC14	A4	Q5	B5	Q10	B3	Q15	B3	Q20	C1	Q25	B1	Q30	A4		
IC5	B2	IC10	A2	Q1	B5	Q6	B4	Q11	B3	Q16	C3	Q21	C1	Q26	B1	Q31	B4		

SCHEMATIC DIAGRAM OF PO

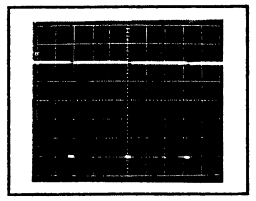
1. 20µs/DIV 0.5V/DIV



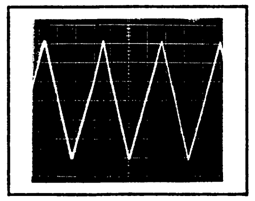
2. 10µs/DIV 0.2V/DIV



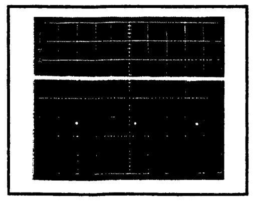
3. 20µs/DIV 1V/DIV



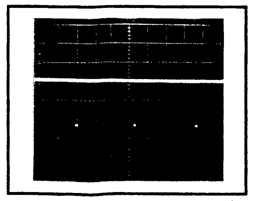
4. 5µs/DIV 0.1V/DIV



5. 5ms/DIV 1V/DIV



6. 5ms/DIV 1V/DIV



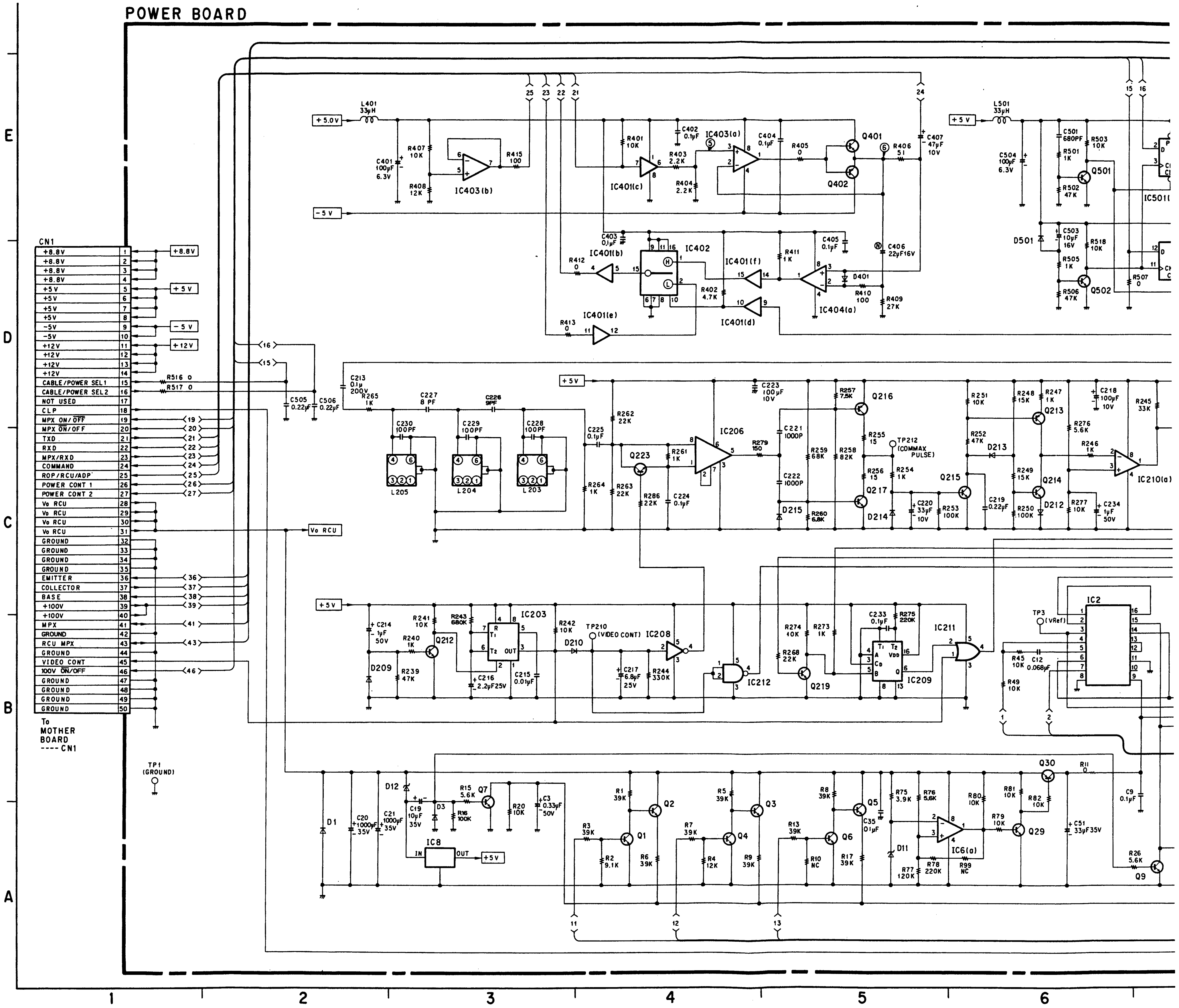
(Voltages)

	B	C	E
Q1	0.7	0	0
2	0	14.9	0.1
3	0	14.9	0.1
4	0.6	0	0
5	0	14.9	0.1
6	0.6	0	0
7	0	0	0
9	0	0.2	0
10	0	0	5.9
11	-4.8	-4.7	0.2
12	6.0	14.9	5.9
13	5.9	12.4	14.9
14	5.9	12.4	14.9
15	8.4	14.9	7.9
16	8.4	0	7.9
17	7.9	9.2	14.9
18	7.9	9.2	14.9
19	2.5	1.8	2.5
20	0	1.0	2.5
21	11.5	11.6	12.3
22	2.4	11.5	1.8
23	5.9	9.0	5.4
24	5.9	0	5.4
26	5.4	0.1	9.0
27	8.9	8.2	8.2
28	8.2	0	9.0
29	0.7	0	0
30	14.2	14.9	14.9
31	-4.5	-4.8	-5.2
32	-0.7	-4.5	-0.1-

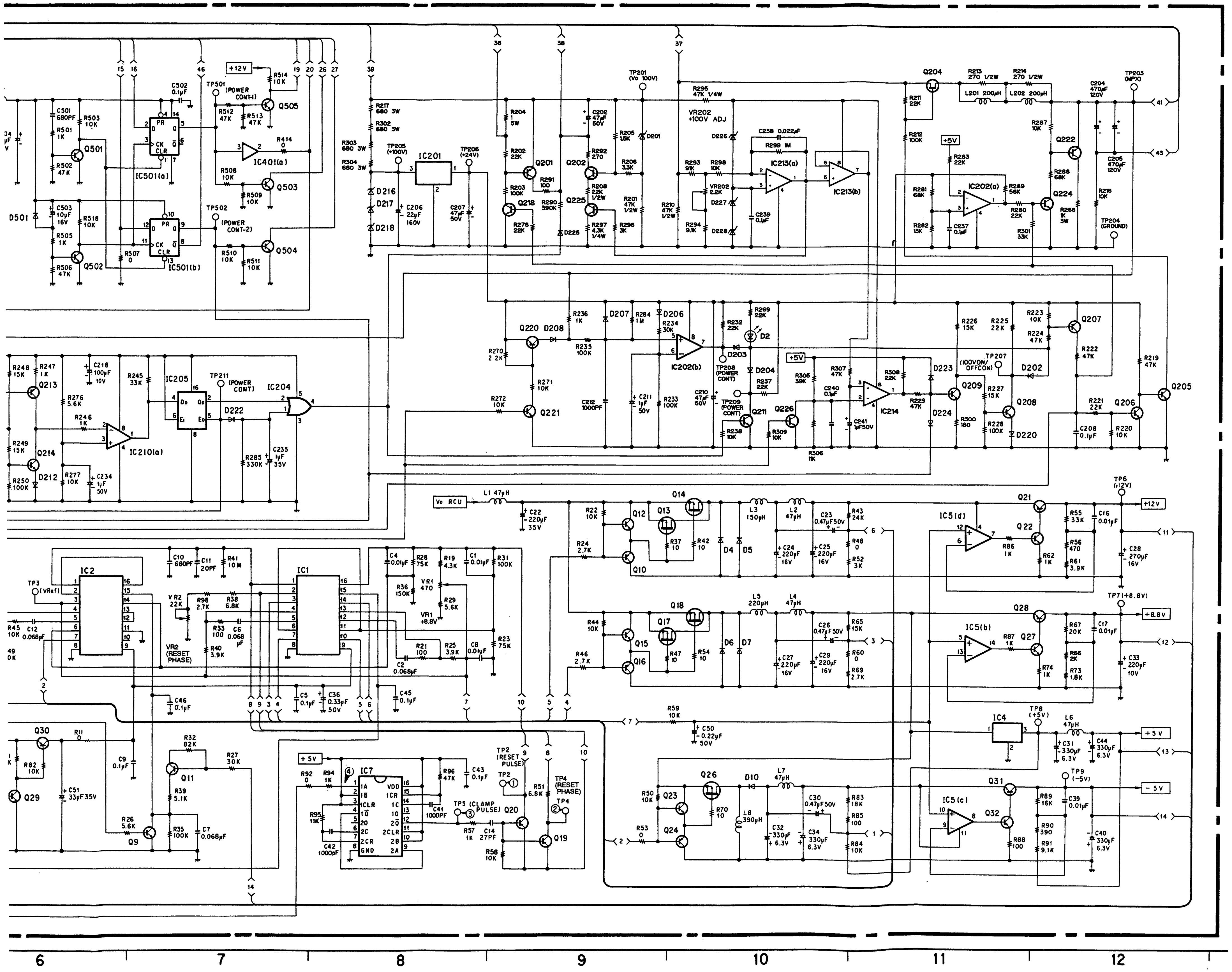
	B	C	E
Q205	-0.1	0.8	0.2
202	-0.1	-0.1	0
204	0	0	0
205	0	0	-0.1
206	0	-0.1	-0.1
207	-0.1	-0.1	-0.1
208	-0.1	-0.1	-0.1
209	-0.1	-0.1	-0.1
210	-0.1	-0.1	-0.1
211	-0.1	-0.1	-0.1
212	0	-0.1	-0.1
213	0	0.3	5.0
214	1.0	0.3	0.3
215	-0.1	5.0	0
216	0	-0.1	-0.1
217	0.3	0	0
218	-0.1	0.3	-0.1
220	0	0.3	0
221	-0.1	-0.1	0
222	-0.1	-0.1	-0.1
223	3.7	3.1	3.1
224	-0.1	-0.1	-0.1
401	2.9	5.0	2.3
402	2.9	-4.8	2.3
501	0	4.9	0
502	0	4.9	0
503	0	1.5	0
505	0	9.1	0

	IC1	IC2	IC4	IC5	IC6	IC7	IC8	IC201	IC202	IC203	IC204	IC205
Pin 1	1.7	1.7	9.0	-0.1	7.8	4.3	5.0	0.2	-0.1	0	0	5.0
2	1.0	2.5	0	0	12.9	5.0	0	0	0	5.0	0	5.0
3	1.4	1.4	5.0	-0.1	13.6	5.0	8.9	0	-0.1	0	0	0
4	1.4	1.4		0	0	3.3			-0.1	5.0	4.9	5.0
5	1.7	1.8		-0.1	0	0.4			-0.1	3.3	5.0	0
6	1.1	1.6		-0.1	14.9	0			-0.1	0		5.0
7	6.7	5.9		-0.1	0	4.4			0	0		5.0
8	0	0		-0.1	14.9	0			-0.1	5.0		0
9	14.9	14.9		-0.1		3.3						0
10	3.7	0		-0.1		5.0						5.0
11	1.1	0		-0.1		5.0						5.0
12	1.6	1.7		-0.1		4.6						0
13	1.4	1.7		-0.1		1.7						5.0
14	1.4	0		0		0						5.0
15	0.1	0.2				3.1						0
16	2.5	2.5				5.0						5.0

	IC206	IC208	IC209	IC210	IC211	IC212	IC213	IC401	IC402	IC401	IC402
Pin 1	-0.1	0	0	5.0	0	0	2.8	5.0	5.0	5.0	5.0
2	-0.1	0	5.0	0.3	0	0	2.3	0	5.0	1.8	0
3	0	0	5.0	3.2	0	0	2.3	0	0.3	2.3	5.0
4	3.5	5.0	0	0	0	0	-4.8	5.0	0.3	0	5.0
5	3.5	5.0	0.5	0	0	5.0	2.7	5.0	0.3	0	0
6	5.0		0	5.0			2.7	4.6	0	5.0	5.0
7	2.4		5.0	0			2.7	5.0	0	0	0
8	3.1		0	0			5.0	0	0	5.0	4.9
9			5.0					0	5.0		0
10			0					0.1	0.1		5.0
11			0.1					5.0	5.0		4.9
12			0.1					5.0	0.3		0
13			0					0	0.3		4.9
14			5.0					5.0	0.3		5.0
15			0					5.0	5.0		
16			5.0					0	5.0		


POWER BOARD
CN1
+8.8V 1
+8.8V 2
+8.8V 3
+8.8V 4
+5V 5
+5V 6
+5V 7
+5V 8
-5V 9
-5V 10
+12V 11
+12V 12
+12V 13
+12V 14
CABLE/POWER SEL1 15
CABLE/POWER SEL2 16
NOT USED 17
CLP 18
MPX ON/OFF 19
MPX ON/OFF 20
TXD 21
RXD 22
MPX/RXD 23
COMMAND 24
ROP/RCU/ADP 25
POWER CONT 1 26
POWER CONT 2 27
Vo RCU 28
Vo RCU 29
Vo RCU 30
Vo RCU 31
GROUND 32
GROUND 33
GROUND 34
GROUND 35
EMITTER 36
COLLECTOR 37
BASE 38
+100V 39
+100V 40
MPX 41
GROUND 42
RCU MPX 43
GROUND 44
VIDEO CONT 45
100V ON/OFF 46
GROUND 47
GROUND 48
GROUND 49
GROUND 50
To MOTHER BOARD ---- CN1
TP1 (GROUND)
+8.8V
+5V
-5V
+12V
R516 0
R517 0
Vo RCU
+5.0V
L401 33µH
C401 100µF 6.3V
R407 10K
R408 12K
IC403(b)
R415 100
R401 10K
IC401(c)
R403 2.2K
R404 2.2K
C402 0.1µF
IC403(a)
C404 0.1µF
R405 0
Q401
Q402
R406 51
C407 47µF 10V
C403 0.1µF
IC401(b)
R412 0
IC402
IC401(f)
R411 1K
C405 0.1µF
C406 22µF16V
R402 4.7K
D401
R410 100
R409 27K
IC401(d)
IC404(a)
R413 0
IC401(e)
L501 33µH
C504 100µF 6.3V
C501 680PF
R503 10K
R501 1K
Q501
R502 47K
IC501
D501
C503 10µF 16V
R518 10K
R505 1K
R506 47K
Q502
R507 0
C505 0.22µF
C506 0.22µF
C213 0.1µ 200V
R265 1K
C227 8 PF
C226 9PF
C230 100PF
C229 100PF
C228 100PF
L205
L204
L203
C225 0.1µF
R262 22K
Q223
R261 1K
IC206
R279 150
C223 100µF 10V
C221 1000P
C222 1000P
R264 1K
R263 22K
R286 22K
C224 0.1µF
D215
R259 68K
R258 82K
R260 6.8K
R257 7.5K
Q216
R255 15
TP212 (COMMAX PULSE)
R256 15
R254 1K
Q217
D214
C220 33µF 10V
R253 100K
Q215
C219 0.22µF
R251 10K
R252 47K
D213
R249 15K
Q214
R250 100K
D212
R248 15K
R247 1K
Q213
C218 100µF 10V
R276 5.6K
R246 1K
R245 33K
R277 10K
C234 1µF 50V
IC210(a)
C214 1µF 50V
R241 10K
R240 1K
Q212
R243 680K
IC203
R239 47K
D209
C216 2.2µF25V
C215 0.01µF
R242 10K
TP210 (VIDEO CONT)
D210
IC208
C217 6.8µF 25V
R244 330K
IC212
R274 10K
R273 1K
R268 22K
Q219
C233 0.1µF
R275 220K
IC209
IC211
TP3 (VRef)
R45 10K
C12 0.068µF
R49 10K
IC2
D1
C20 1000µF 35V
C21 1000µF 35V
D12
C19 10µF 35V
D3
R15 5.6K
Q7
R16 100K
R20 10K
C3 0.33µF 50V
IC8
IN OUT
R1 39K
Q2
R3 39K
Q1
R2 9.1K
R6 39K
R5 39K
Q3
R7 39K
Q4
R4 12K
R9 39K
R8 39K
R13 39K
Q6
R10 NC
R17 39K
Q5
C35 0.1µF
D11
R75 3.9K
R76 5.6K
R77 120K
R78 220K
R99 NC
IC6(a)
R80 10K
R81 10K
R82 10K
R79 10K
Q29
Q30
R11 0
C51 33µF35V
C9 0.1µF
R26 5.6K
Q9
A
B
C
D
E
1
2
3
4
5
6

RAM OF POWER BOARD


IC501(a)
IC501(b)
IC401(a)
Q501
Q502
Q503
Q504
Q505
D501
TP501 (POWER CONT-1)
TP502 (POWER CONT-2)
+12V
IC201
TP205 (+100V)
TP206 (+24V)
TP201 (Vo 100V)
VR202 +100V ADJ
IC213(a)
IC213(b)
IC202(a)
IC202(b)
TP203 (MPX)
TP204 (GROUND)
Q201
Q202
Q204
Q218
Q222
Q224
Q225
Q220
Q221
Q207
Q205
Q206
Q208
Q209
Q211
Q226
Q213
Q214
IC205
IC204
IC210(a)
IC214
TP211 (POWER CONT)
TP208 (POWER CONT)
TP209 (POWER CONT)
TP207 (100VON/OFFCON)
+5V
D2
D202
D203
D204
D206
D207
D208
D212
D216
D217
D218
D220
D222
D223
D224
D225
IC1
IC2
IC4
IC5(a)
IC5(b)
IC5(c)
IC5(d)
IC7
TP3 (VRef)
VR1 +8.8V
VR2 (RESET PHASE)
Vo RCU
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q26
Q27
Q28
Q29
Q30
Q31
Q32
TP2 (RESET PULSE)
TP4 (RESET PHASE)
TP5 (CLAMP PULSE)
TP6 (+12V)
TP7 (+8.8V)
TP8 (+5V)
TP9 (-5V)
+12V
+8.8V
+5V
-5V
6
7
8
9
10
11
12

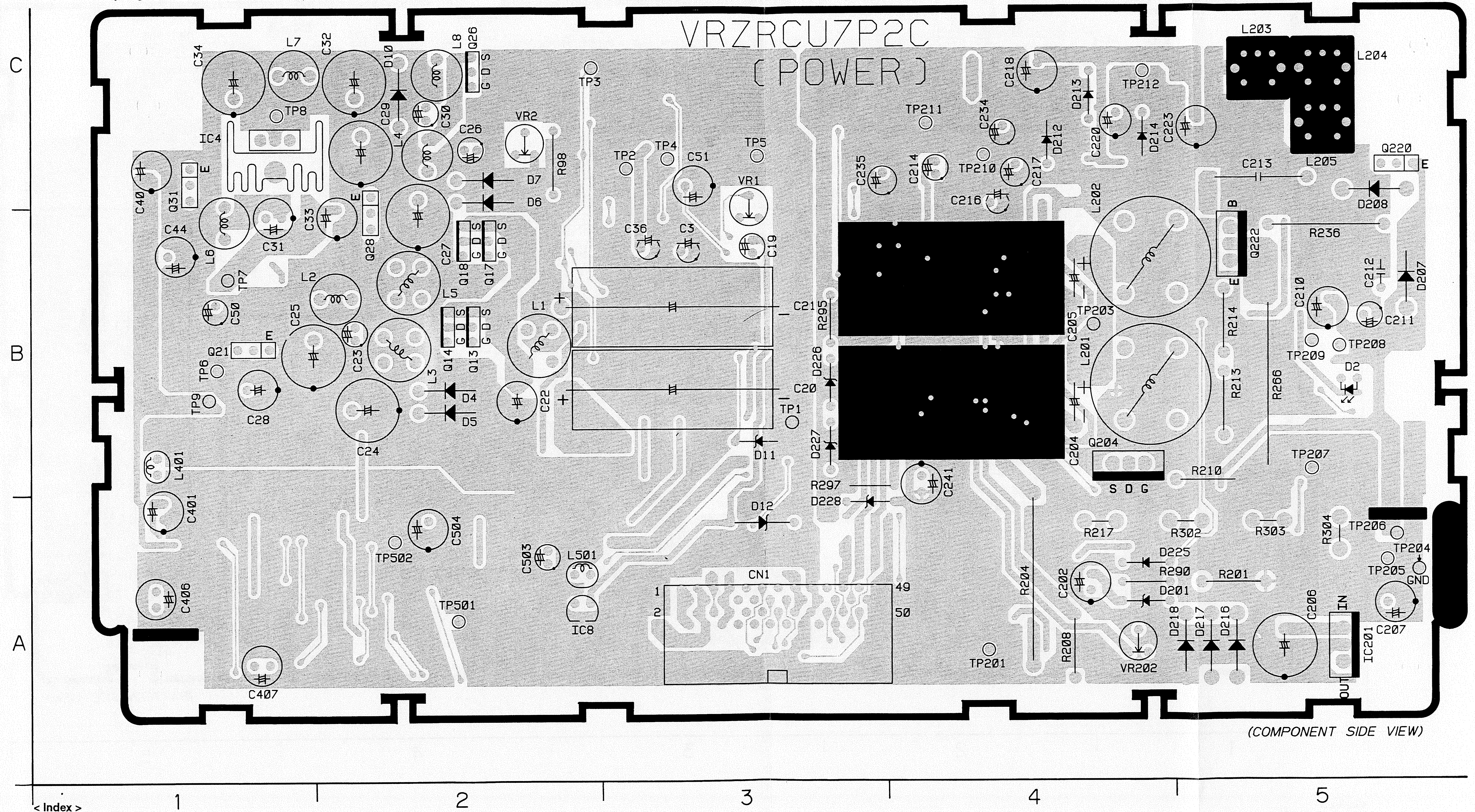
< Index >
POWER BOARD

IC1	B7, B8
IC2	B6
IC4	A11
IC5	A11, B11, C11
IC6	A5, A6
IC7	A8
IC8	A3
IC201	E9
IC202	D10, E11
IC203	B3
IC205	C7
IC206	C4
IC208	B4
IC209	B5
IC210	C6
IC211	B6
IC212	B4
IC213	D10
IC401	D4, E4, E7
IC402	D4
IC403	E3, E4
IC404	D5
IC410	C6
IC501	D7, E7
Q1	A4
Q2	A4
Q3	A4
Q4	A4
Q5	A5
Q6	A5
Q7	A3
Q9	A7
Q10	C9
Q11	A7
Q12	C9
Q13	C9, C10
Q15	B9
Q14	C10
Q16	B9
Q17	B9, B10
Q18	B10
Q19	A9
Q20	A9
Q21	C12
Q22	C21
Q23	A10
Q24	A10
Q26	A10
Q27	B12
Q28	B12
Q29	A6
Q30	A6
Q31	A11
Q32	A11
Q201	E9
Q202	E9
Q204	E11
Q205	C12
Q206	C12
Q207	D12
Q208	C11
Q209	C11
Q211	C10
Q212	B3
Q213	C6
Q214	C6
Q215	C6
Q218	C9
Q219	B5
Q220	D9
Q221	C9
Q216	C5
Q217	C5
Q222	E12
Q223	C4
Q224	D12
Q225	C9
Q226	C10
Q401	D5
Q402	D5
Q501	E6
Q502	D6
Q503	E7
Q504	D7
Q505	E7

D1	A2
D2	D10
D4	C10
D5	C10
D6	B10
D7	B10
D10	A10
D11	A5
D12	A2
D202	D12
D203	D10
D204	C10
D206	D9
D207	D9
D208	D9
D209	B2
D210	B4
D212	C6
D213	C6
D214	C5
D215	C5
D216	E8
D217	D8
D218	D8
D222	C7
D223	C11
D224	C11
D225	C9
D226	E10
D227	D10
D228	D10
D401	D5

CONDUCTOR VIEW OF POWER BOARD (COMPONENT SIDE)

POWER BOARD


VRZRCU7P2C
(POWER)
C
B
A
1
2
3
4
5
C34
L7
C32
D10
L8
Q26
G D S
TP3
TP8
IC4
C29
L4
C30
C26
VR2
R98
D7
D6
C40
Q31
E
C33
E
Q28
C44
L6
C31
TP7
L2
C27
Q18
Q17
C50
C25
L5
Q21
E
C23
Q14
Q13
L1
C21
TP6
TP9
C28
L3
D4
D5
C22
C20
C24
L401
C401
C406
C407
C504
TP502
C503
L501
IC8
TP501
TP2
TP4
C51
TP5
VR1
C36
C3
C19
D11
TP1
D12
CN1
1
2
49
50
TP211
C234
C235
C214
TP210
C216
C217
C218
D213
D212
TP212
C220
D214
C223
L203
L204
L205
Q220
E
C213
D208
L202
B
Q222
E
R236
C212
D207
C210
C211
R295
D226
D227
C205
TP203
L201
C204
R214
R213
R266
TP209
TP208
D2
Q204
S D G
R210
TP207
R297
D228
C241
R217
R302
R303
R304
TP206
TP204
TP205
GND
D225
R290
R201
D201
R204
C202
R208
VR202
D218
D217
D216
C206
IN
IC201
OUT
C207
TP201

(COMPONENT SIDE VIEW)

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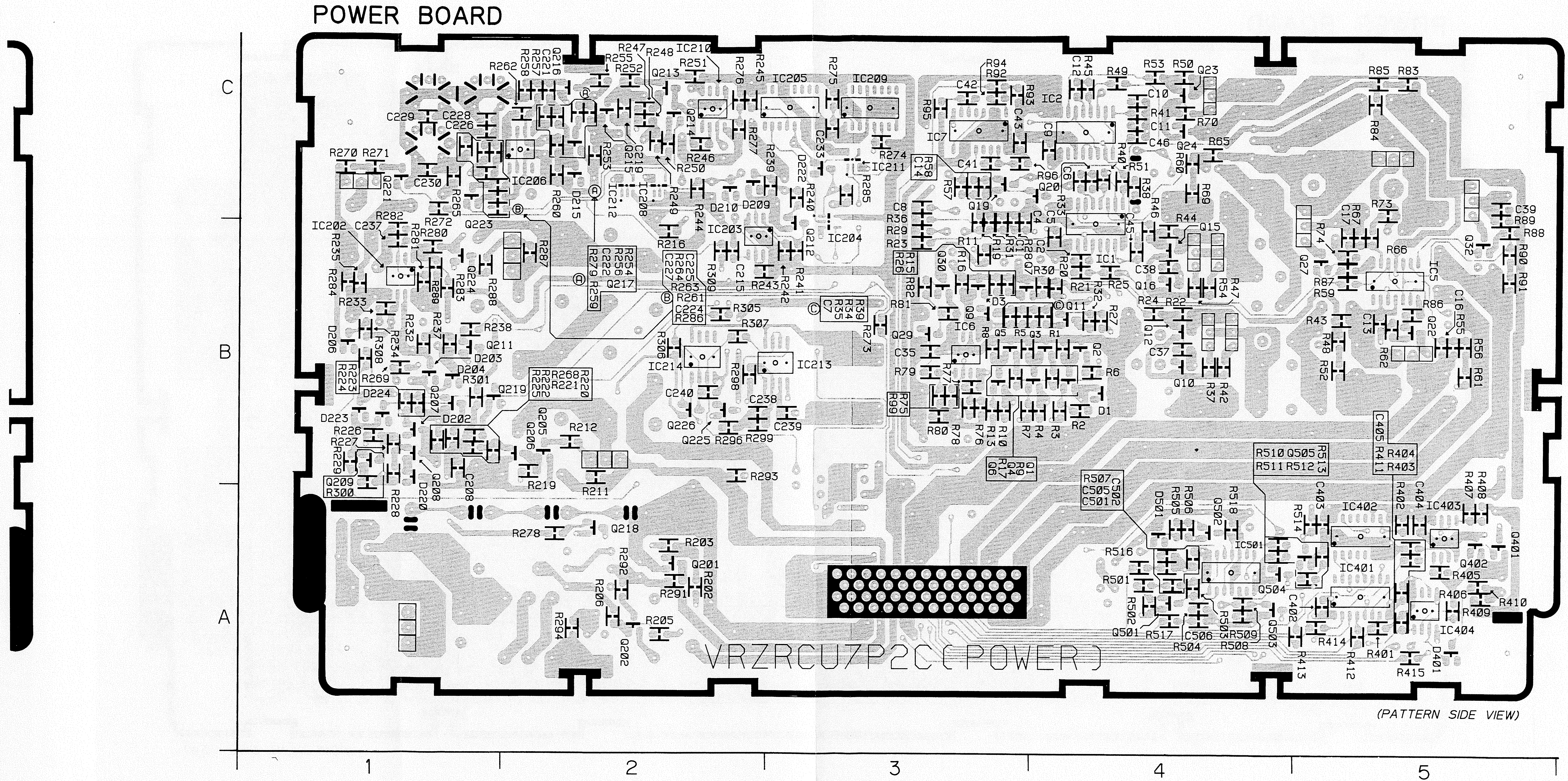
POWER BOARD
COMPONENT SIDE

IC4	C1	Q21	B1	D2	B5	D12	A3	D216	A5
IC8	A2	Q26	C2	D4	B2	D201	A4	D217	A5
IC201	A5	Q28	B2	D5	B2	D207	B5	D218	A5
Q13	B2	Q31	C1	D6	C2	D208	C5	D225	A4
Q14	B2	Q204	B4	D7	C2	D212	C4	D226	B3
Q17	B2	Q220	C5	D10	C2	D213	C4	D227	B3
Q18	B2	Q222	B5	D11	B3	D214	C4	D228	A3

CONDUCTOR VIEW OF POWER BOARD (PATTERN SIDE)



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POWER BOARD
PATTER SIDE

IC1	B4	IC204	B3	IC212	C2	IC501	A4	Q7	B3	Q19	C3	Q30	B3	Q208	B1	Q216	C2	Q225	B2	Q504	A4	D206	B1	D224	B1
IC2	C4	IC205	C3	IC213	B3	Q1	B4	Q9	B3	Q20	C4	Q32	B5	Q209	B1	Q217	C2	Q226	B2	Q505	A5	D209	C2	D401	A5
IC5	B5	IC206	C2	IC214	B2	Q2	B4	Q10	B4	Q22	B5	Q201	A2	Q211	B1	Q218	A2	Q401	A5	D1	B4	D210	C2	D501	A4
IC6	B3	IC208	C2	IC401	A5	Q3	B4	Q11	A4	Q23	C4	Q202	A2	Q212	B3	Q219	B1	Q402	A5	D3	B3	D215	C2		
IC7	C3	IC209	C3	IC402	A5	Q4	B4	Q12	B4	Q24	C4	Q205	B2	Q213	C2	Q221	C1	Q501	A4	D202	B1	D220	B1		
IC202	B1	IC210	C2	IC403	A5	Q5	B3	Q15	B4	Q27	B5	Q206	B2	Q214	C2	Q223	C1	QS02	A4	D203	B1	D222	C3		
IC203	B2	IC211	C3	IC404	A5	Q6	B3	Q16	B4	Q29	B3	Q207	B1	Q215	C2	Q224	B1	Q503	A4	D204	B1	D223	B1		

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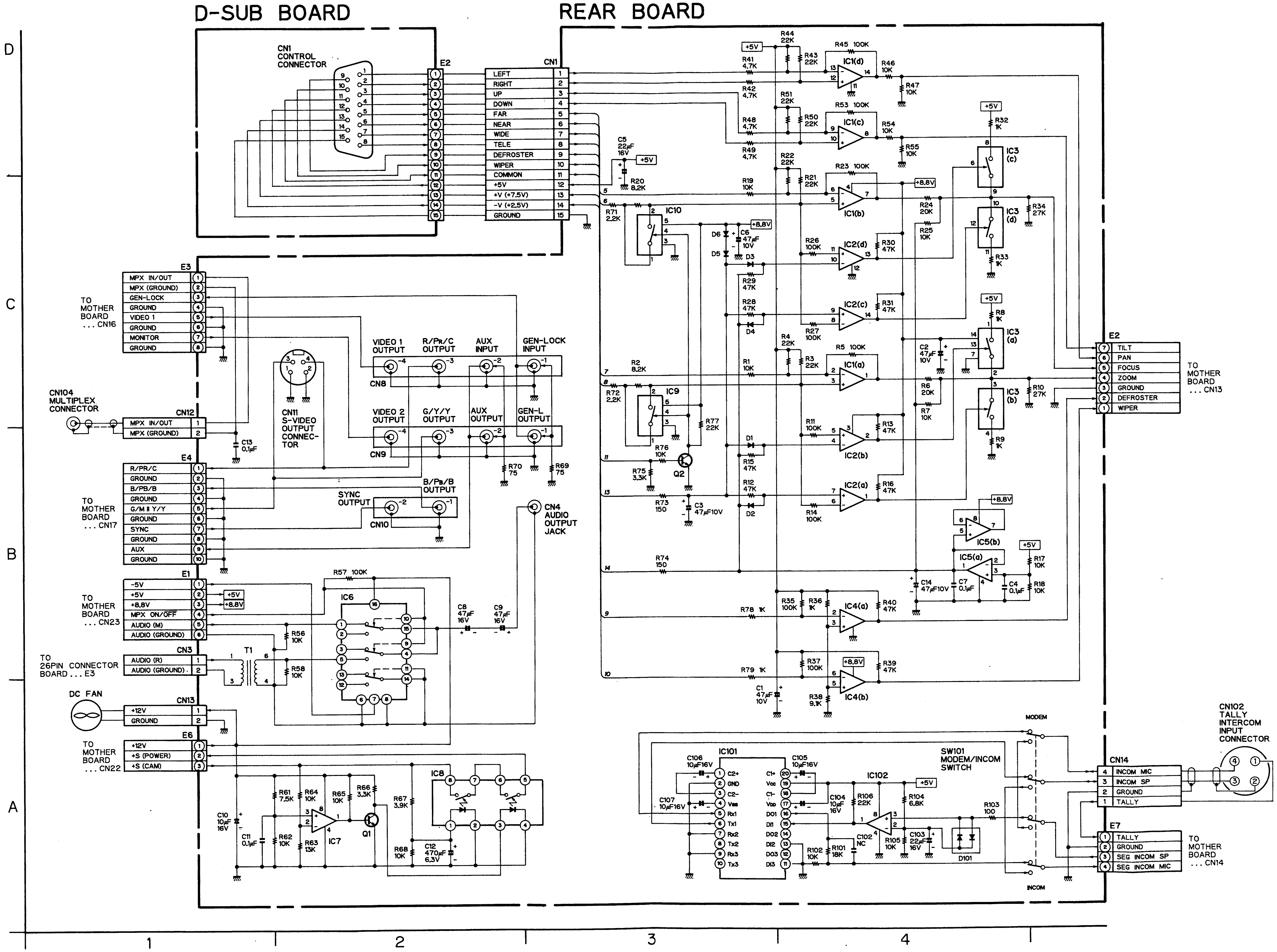
REAR BOARD

IC1	C4, D4
IC2	B4, C4
IC3	C4, D4
IC4	A4, B4
IC5	B4
IC6	A2, B2
IC7	A2
IC8	A2, A3
IC9	B3, C3
IC10	A1
IC101	A3, A4
IC102	A4
Q1	A2
Q2	A3
D1	B3
D2	B2
D3	C3
D4	C3
D5	C3
D6	C3
D101	A4

SCHEMATIC DIAGRAM OF REAR BOARD

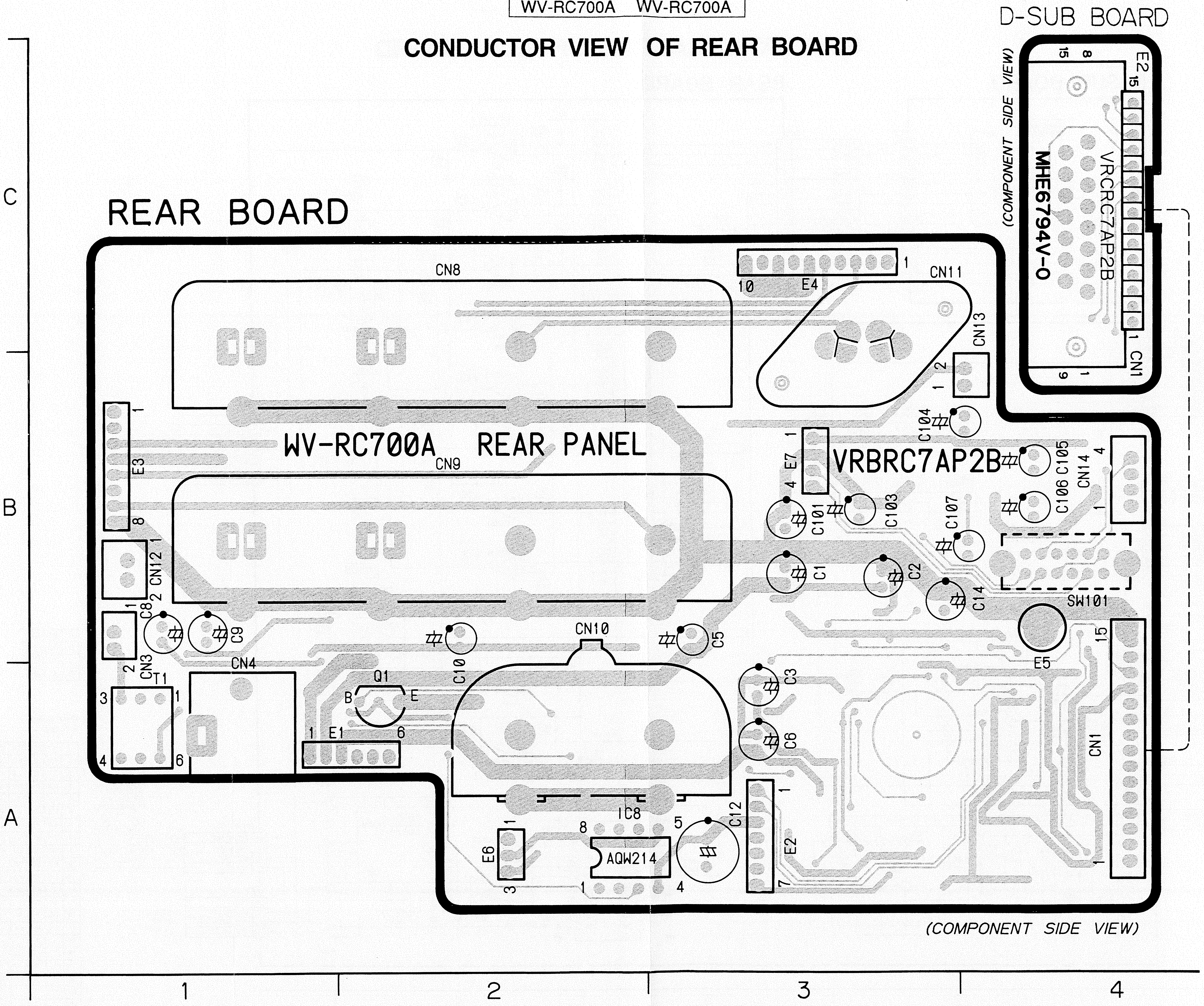

D-SUB BOARD
REAR BOARD
D
C
B
A
1
2
3
4
CN1 CONTROL CONNECTOR
E2
CN1
LEFT
RIGHT
UP
DOWN
FAR
NEAR
WIDE
TELE
DEFROSTER
WIPER
COMMON
+5V
+V (+7.5V)
-V (+2.5V)
GROUND
E3
MPX IN/OUT
MPX (GROUND)
GEN-LOCK
GROUND
VIDEO 1
GROUND
MONITOR
GROUND
TO MOTHER BOARD ... CN16
CN104 MULTIPLEX CONNECTOR
CN12
MPX IN/OUT
MPX (GROUND)
C13 0.1µF
E4
R/PR/C
GROUND
B/PB/B
GROUND
G/M II Y/Y
GROUND
SYNC
GROUND
AUX
GROUND
TO MOTHER BOARD ... CN17
E1
-5V
+5V
+8.8V
MPX ON/OFF
AUDIO (M)
AUDIO (GROUND)
TO MOTHER BOARD ... CN23
CN3
AUDIO (R)
AUDIO (GROUND)
TO 26PIN CONNECTOR BOARD ... E3
T1
DC FAN
CN13
+12V
GROUND
E6
+12V
+S (POWER)
+S (CAM)
TO MOTHER BOARD ... CN22
CN11 S-VIDEO OUTPUT CONNECTOR
VIDEO 1 OUTPUT
R/PR/C OUTPUT
AUX INPUT
GEN-LOCK INPUT
CN8
VIDEO 2 OUTPUT
G/Y/Y OUTPUT
AUX OUTPUT
GEN-L OUTPUT
CN9
R70 75
R69 75
B/PB/B OUTPUT
SYNC OUTPUT
CN10
CN4 AUDIO OUTPUT JACK
R57 100K
IC6
R56 10K
R58 10K
C8 47µF 16V
C9 47µF 16V
C10 10µF 16V
C11 0.1µF
R61 7.5K
R62 10K
R64 10K
R63 13K
IC7
R65 10K
R66 3.3K
Q1
R67 3.9K
R68 10K
C12 470µF 6.3V
IC8
C5 22µF 16V
+5V
R20 8.2K
R71 2.2K
IC10
R2 8.2K
R72 2.2K
IC9
R77 22K
R76 10K
R75 3.3K
Q2
R73 150
C3 47µF10V
R74 150
R78 1K
R79 1K
C1 47µF 10V
R41 4.7K
R42 4.7K
R44 22K
R43 22K
R45 100K
IC1(d)
R46 10K
R47 10K
R48 4.7K
R49 4.7K
R51 22K
R50 22K
R53 100K
IC1(c)
R54 10K
R55 10K
R19 10K
R22 22K
R21 22K
R23 100K
IC1(b)
+8.8V
D6
D5
C6 47µF 10V
D3
R26 100K
IC2(d)
R30 47K
R29 47K
R28 47K
D4
R27 100K
IC2(c)
R31 47K
R4 22K
R3 22K
R5 100K
R1 10K
IC1(a)
R11 100K
IC2(b)
R13 47K
D1
R15 47K
R12 47K
D2
R14 100K
IC2(a)
R16 47K
R35 100K
R36 1K
IC4(a)
R40 47K
R37 100K
R38 9.1K
IC4(b)
R39 47K
R24 20K
R25 10K
R32 1K
IC3 (c)
R34 27K
IC3 (d)
R33 1K
R8 1K
IC3 (a)
C2 47µF 10V
R6 20K
R7 10K
IC3 (b)
R10 27K
R9 1K
IC5(b)
IC5(a)
C14 47µF10V
C7 0.1µF
C4 0.1µF
R17 10K
R18 10K
E2
TILT
PAN
FOCUS
ZOOM
GROUND
DEFROSTER
WIPER
TO MOTHER BOARD ... CN13
IC101
C106 10µF16V
C105 10µF16V
C107 10µF16V
C2+
GND
C2-
VSS
RX1
TX1
RX2
TX2
RX3
TX3
C1+
VCC
C1-
VDD
DO1
DI1
DO2
DI2
DO3
DI3
C104 10µF 16V
R106 22K
IC102
R104 6.8K
R103 100
C102 NC
R102 10K
R101 18K
R105 10K
C103 22µF 16V
D101
SW101 MODEM/INCOM SWITCH
MODEM
INCOM
CN14
INCOM MIC
INCOM SP
GROUND
TALLY
CN102 TALLY INTERCOM INPUT CONNECTOR
E7
TALLY
GROUND
SEG INCOM SP
SEG INCOM MIC
TO MOTHER BOARD ... CN14

	Q1	Q2
B	0.7	0
C	0	8.8
E	0	0

Rear Board
< Voltage >

	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC101
1	5.0	0	5.0	0	2.5	0	0.7	0	5.0	5.0	4.8
2	5.0	0	2.6	4.9	2.5	–	0	0	5.0	5.0	0
3	5.0	8.8	2.6	4.5	2.5	0	6.7	0	0	0	-5.1
4	8.8	7.1	0	0	0	0	0	0	8.8	8.8	-9.9
5	5.0	4.9	0	4.5	2.5	0	–	0	8.8	8.8	0
6	5.0	4.9	0	4.9	2.5	0	–	1.0			0.7
7	5.0	3.0	0	0	2.5	-4.7	0	1.0			0
8	5.0	4.9	5.0	8.8	8.8	0	11.7	0			9.9
9	5.0	3.0	2.6			9.3					0
10	5.0	7.1	2.6			9.3					9.9
11	0	4.9	0			0					0
12	5.0	0	0			0					5.0
13	5.0	0	0			1.4					0
14	5.0	0	8.8			0					5.0
15						0					0
16						11.7					5.0
17											9.9
18											2.4
19											5.0
20											7.4

CONDUCTOR VIEW OF REAR BOARD


D-SUB BOARD
(COMPONENT SIDE VIEW)
MHE6794V-0
VRCRC7AP2B
E2
15
8
9
1
CN1
REAR BOARD
WV-RC700A REAR PANEL
VRBRC7AP2B
CN8
CN9
CN10
CN11
CN12
CN13
CN14
CN1
CN3
CN4
E1
E3
E4
E5
E6
E7
E2
C1
C2
C3
C5
C6
C8
C9
C10
C12
C14
C101
C103
C104
C105
C106
C107
Q1
B
E
T1
IC8
AQW214
SW101
(COMPONENT SIDE VIEW)
C
B
A
1
2
3
4

IC6	IC7	IC8	IC9	IC10	IC101	IC102
0	0.7	0	5.0	5.0	4.8	0
–	0	0	5.0	5.0	0	2.7
0	6.7	0	0	0	-5.1	2.9
0	0	0	8.8	8.8	-9.9	0
0	–	0	8.8	8.8	0	5.0
0	–	1.0			0.7	0
-4.7	0	1.0			0	1.1
0	11.7	0			9.9	5.0
9.3					0	
9.3					9.9	
0					0	
0					5.0	
1.4					0	
0					5.0	
0					0	
11.7					5.0	
					9.9	
					2.4	
					5.0	
					7.4	

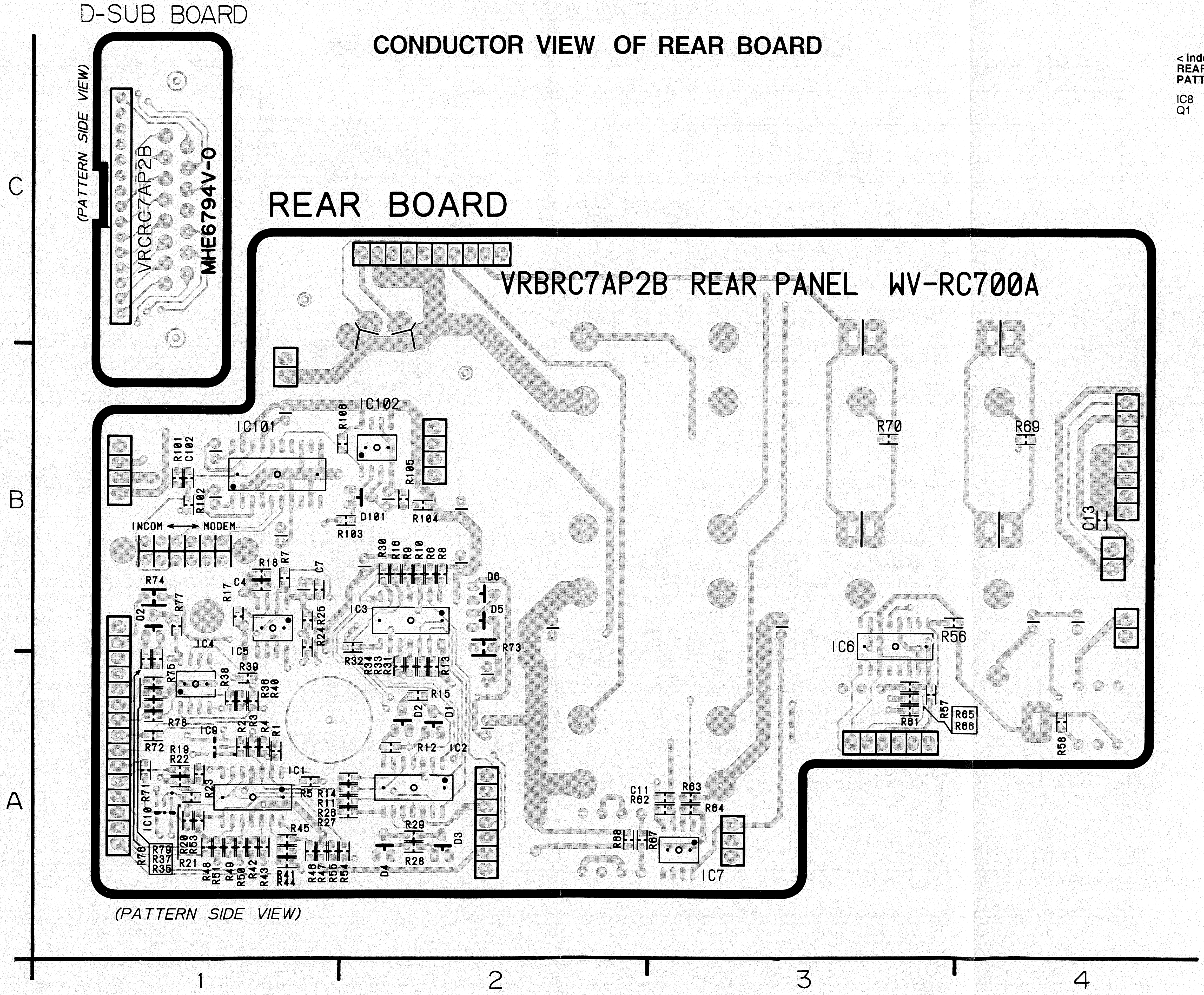
< Index >
REAR BOARD
COMPONENT SIDE

IC1	A1
IC2	A2
IC3	B2
IC4	A1
IC5	B1
IC6	B3
IC7	A3
IC9	A1
IC10	A1
IC101	B1
IC102	B2
Q2	B2
D1	A2
D2	A2
D3	A2
D4	A2
D5	B2
D6	B2
D101	B2

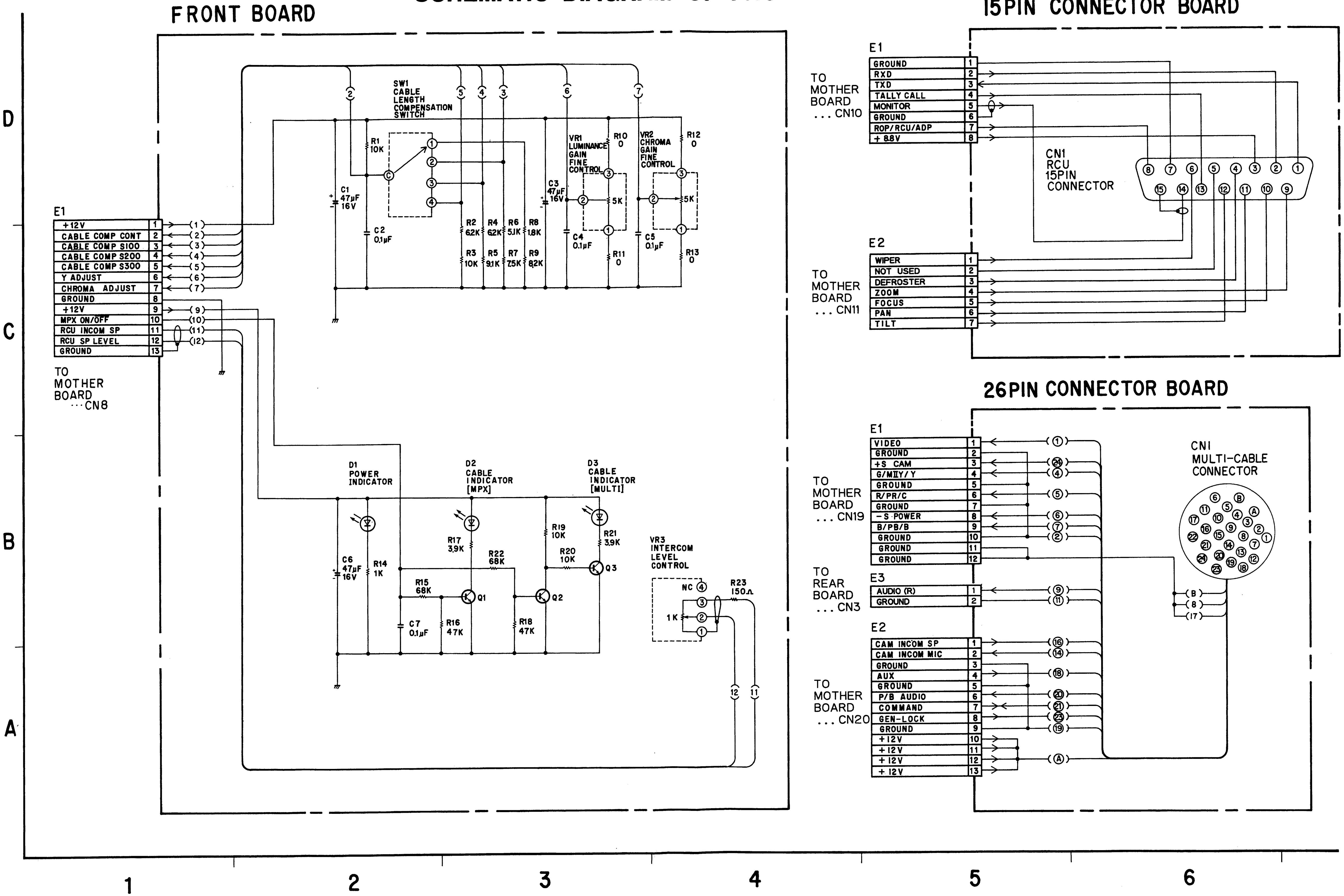
CONDUCTOR VIEW OF REAR BOARD

< Index >
REAR BOARD
PATTERN SIDE

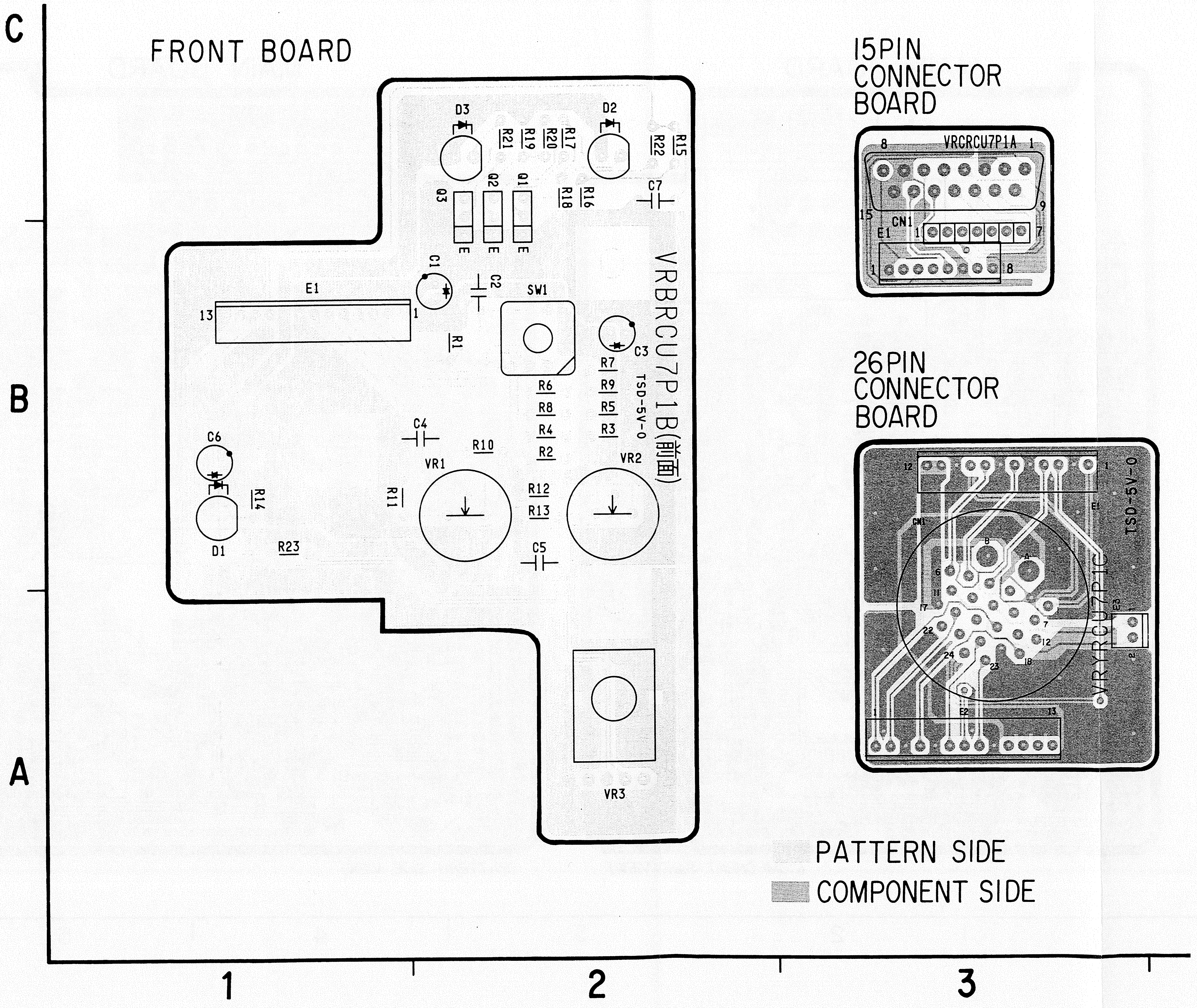
IC8	A2, A3
Q1	A2


D-SUB BOARD
(PATTERN SIDE VIEW)
VRCRC7AP2B
MHE6794V-0
REAR BOARD
VRBRC7AP2B REAR PANEL WV-RC700A
(PATTERN SIDE VIEW)
IC101
IC102
R106
R101
C102
R102
R105
D101
R104
R103
INCOM ←→ MODEM
R74
Q2
R77
R18
R7
C7
C4
R17
R30
R16
R9
R10
R8
D6
D5
R73
IC3
R24
R25
IC4
IC5
R75
R38
R39
R36
R40
R32
R33
R34
R31
R13
R15
D2
D1
R78
R72
IC9
R2
R3
R4
R1
R19
R22
R12
IC2
R71
R23
IC1
R5
R14
R11
R26
R27
IC10
R76
R79
R37
R35
R20
R53
R21
R48
R51
R49
R50
R42
R43
R41
R44
R45
R46
R47
R55
R54
R29
R28
D4
D3
C11
R62
R63
R64
R60
R67
IC7
R70
R69
C13
IC6
R56
R57
R65
R66
R61
R58
A
B
C
1
2
3
4

SCHEMATIC DIAGRAM OF FRONT BOARD


FRONT BOARD
15PIN CONNECTOR BOARD
26PIN CONNECTOR BOARD
D
C
B
A
1
2
3
4
5
6
E1
+12V 1
CABLE COMP CONT 2
CABLE COMP S100 3
CABLE COMP S200 4
CABLE COMP S300 5
Y ADJUST 6
CHROMA ADJUST 7
GROUND 8
+12V 9
MPX ON/OFF 10
RCU INCOM SP 11
RCU SP LEVEL 12
GROUND 13
TO MOTHER BOARD ···CN8
SW1 CABLE LENGTH COMPENSATION SWITCH
R1 10K
C1 47µF 16V
C2 0.1µF
R2 62K
R3 10K
R4 62K
R5 9.1K
R6 5.1K
R7 7.5K
R8 1.8K
R9 8.2K
C3 47µF 16V
VR1 LUMINANCE GAIN FINE CONTROL
5K
R10 0
R11 0
C4 0.1µF
VR2 CHROMA GAIN FINE CONTROL
5K
R12 0
R13 0
C5 0.1µF
D1 POWER INDICATOR
D2 CABLE INDICATOR [MPX]
D3 CABLE INDICATOR [MULTI]
C6 47µF 16V
R14 1K
R15 68K
C7 0.1µF
R16 47K
R17 3.9K
R22 68K
Q1
R18 47K
Q2
R19 10K
R20 10K
R21 3.9K
Q3
VR3 INTERCOM LEVEL CONTROL
NC
1K
R23 150Ω
E1
GROUND 1
RXD 2
TXD 3
TALLY CALL 4
MONITOR 5
GROUND 6
ROP/RCU/ADP 7
+8.8V 8
TO MOTHER BOARD ...CN10
CN1 RCU 15PIN CONNECTOR
E2
WIPER 1
NOT USED 2
DEFROSTER 3
ZOOM 4
FOCUS 5
PAN 6
TILT 7
TO MOTHER BOARD ...CN11
E1
VIDEO 1
GROUND 2
+S CAM 3
G/MIIY/Y 4
GROUND 5
R/PR/C 6
GROUND 7
-S POWER 8
B/PB/B 9
GROUND 10
GROUND 11
GROUND 12
TO MOTHER BOARD ...CN19
E3
AUDIO (R) 1
GROUND 2
TO REAR BOARD ...CN3
E2
CAM INCOM SP 1
CAM INCOM MIC 2
GROUND 3
AUX 4
GROUND 5
P/B AUDIO 6
COMMAND 7
GEN-LOCK 8
GROUND 9
+12V 10
+12V 11
+12V 12
+12V 13
TO MOTHER BOARD ...CN20
CN1 MULTI-CABLE CONNECTOR

CONDUCTOR VIEW OF FRONT BOARD


C
B
A
1
2
3
FRONT BOARD
D3
D2
R21
R19
R20
R17
R22
R15
Q3
Q2
Q1
R18
R16
C7
E
E
E
C1
C2
SW1
E1
13
1
R1
C3
R7
R9
R5
R3
R6
R8
R4
R2
VRBRCU7P1B(前面)
TSD-5V-0
C4
R10
C6
VR1
VR2
R14
R11
R12
R13
D1
R23
C5
VR3
15PIN CONNECTOR BOARD
VRCRCU7P1A
8
1
15
9
CN1
E1
7
26PIN CONNECTOR BOARD
TSD-5V-0
VRYRCU7P1C
CN1
E1
E2
E3
PATTERN SIDE
COMPONENT SIDE

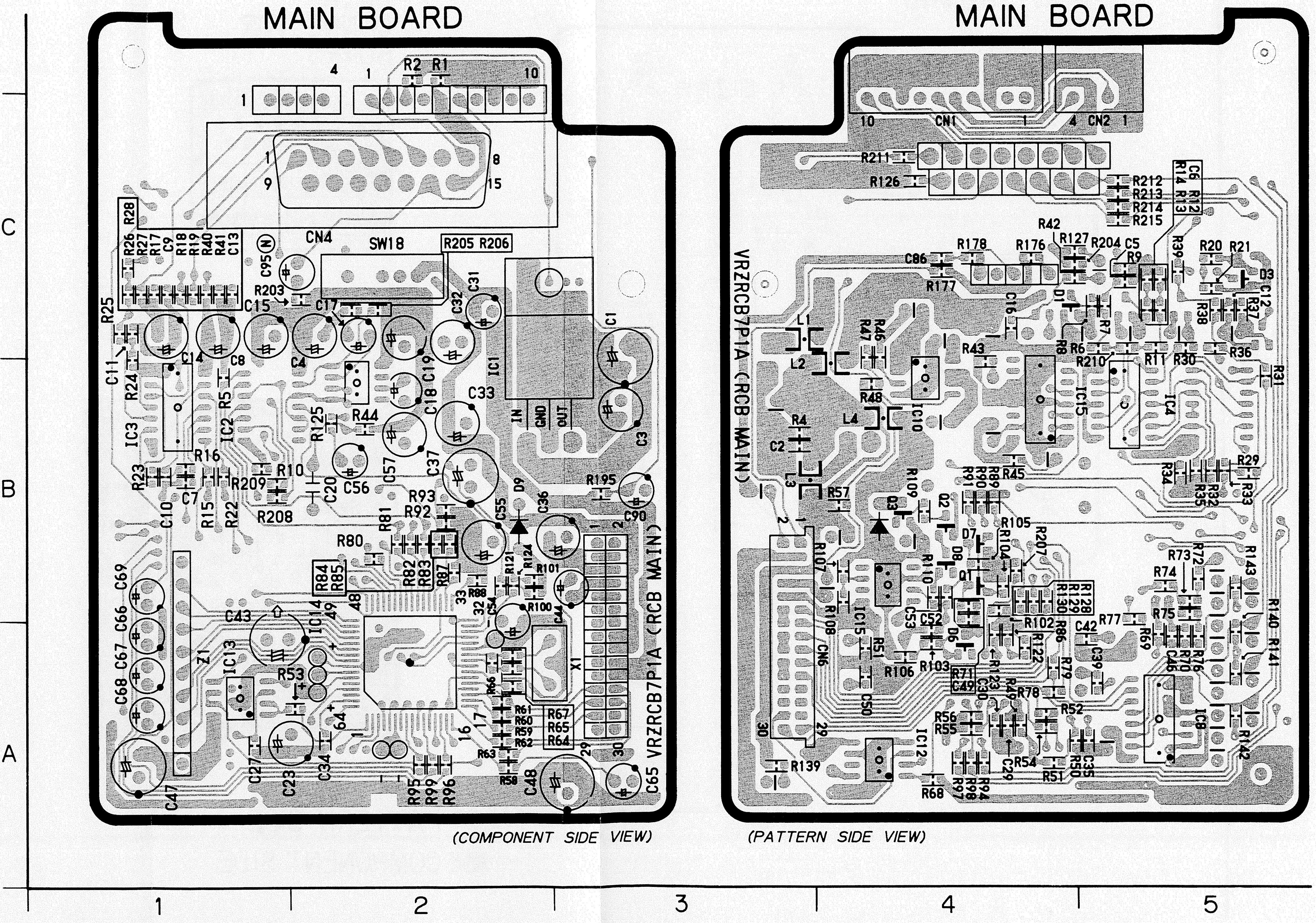
⟨Index⟩
FRONT BOARD

Q1	C2
Q2	C2
Q3	C2
D1	B1
D2	C2
D3	C2

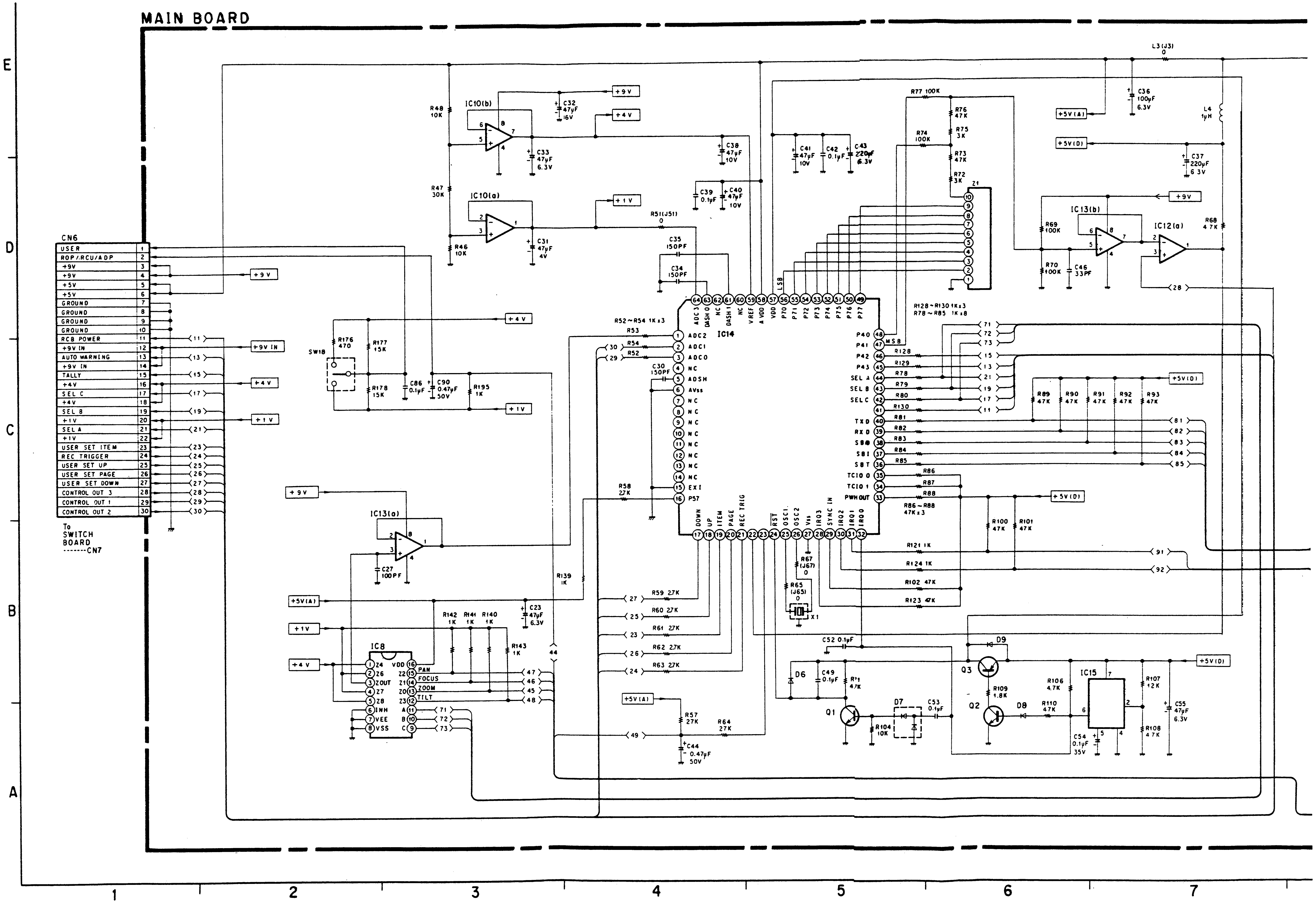
CONDUCTOR VIEW OF MAIN BOARD FOR WV-CB700AE

〈Index〉
MAIN BOARD

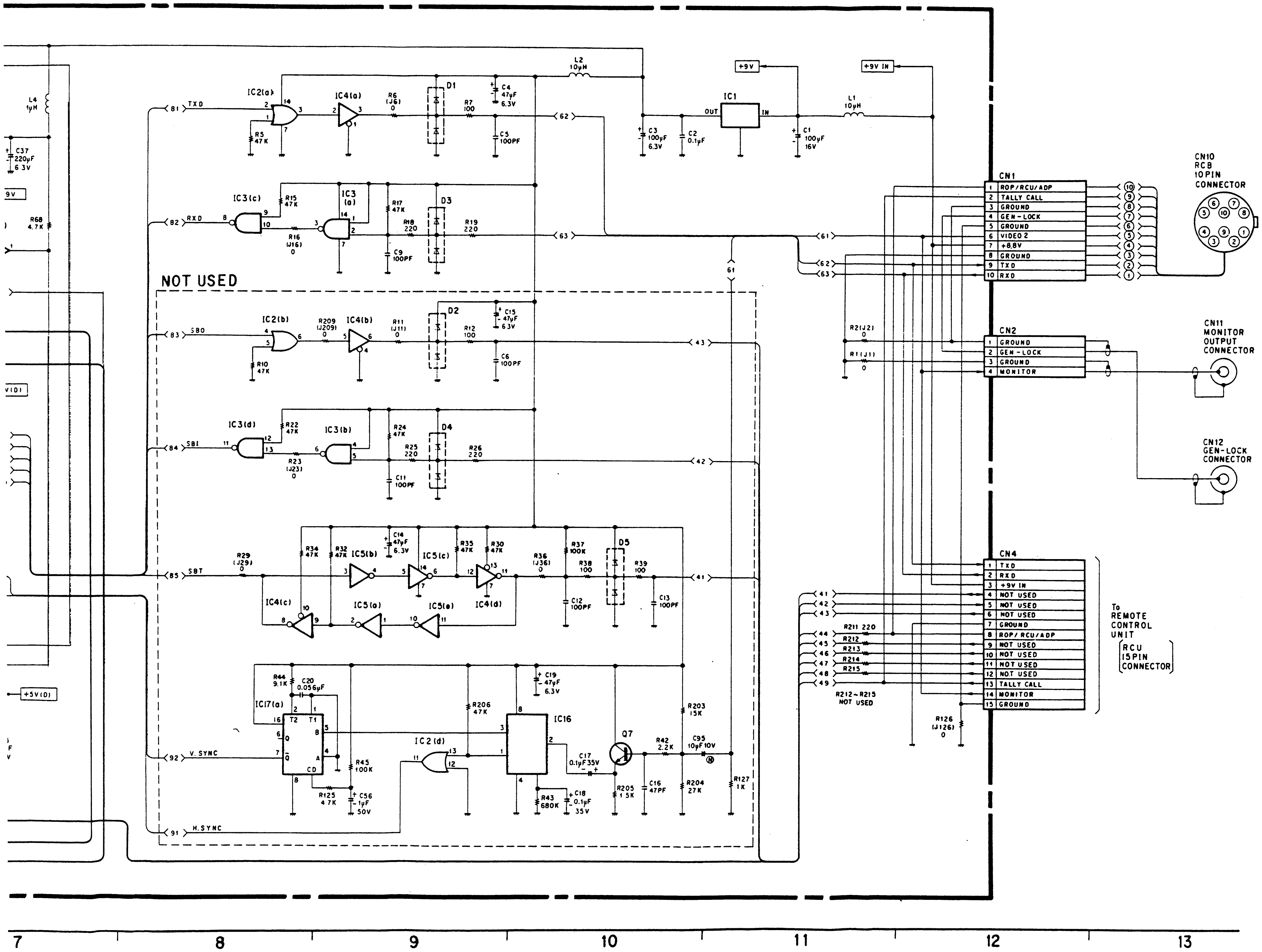
IC1	B2
IC2	B1
IC3	B1
IC4	B3
IC8	A3
IC10	B3
IC12	A3
IC13	A1
IC14	A1
IC15	A3
Q1	A3
Q2	B3
Q3	B3
D1	B3
D3	B3
D6	A3
D7	A3
D8	A3
D9	B2


MAIN BOARD
MAIN BOARD
VRZRCB7P1A (RCB MAIN)
VRZRCB7P1A (RCB MAIN)
CN1
CN2
CN4
CN6
SW18
IC1
IC2
IC3
IC4
IC8
IC10
IC12
IC13
IC14
IC15
X1
Z1
IN
GND
OUT
C
B
A
1
2
3
4
5
(COMPONENT SIDE VIEW)
(PATTERN SIDE VIEW)

SCHEMATIC DIAGRAM OF MAIN


MAIN BOARD
E
D
C
B
A
1
2
3
4
5
6
7
CN6
USER 1
ROP/RCU/ADP 2
+9V 3
+9V 4
+5V 5
+5V 6
GROUND 7
GROUND 8
GROUND 9
GROUND 10
RCB POWER 11
+9V IN 12
AUTO WARNING 13
+9V IN 14
TALLY 15
+4V 16
SEL C 17
+4V 18
SEL B 19
+1V 20
SEL A 21
+1V 22
USER SET ITEM 23
REC TRIGGER 24
USER SET UP 25
USER SET PAGE 26
USER SET DOWN 27
CONTROL OUT 3 28
CONTROL OUT 1 29
CONTROL OUT 2 30
To SWITCH BOARD -------CN7
+9V
+9V IN
+4V
+1V
R48 10K
R47 30K
R46 10K
IC10(b)
IC10(a)
C32 47μF 16V
C33 47μF 6.3V
C31 47μF 4V
C38 47μF 10V
C39 0.1μF
C40 47μF 10V
R51(J51) 0
C35 150PF
C34 150PF
C41 47μF 10V
C42 0.1μF
C43 220μF 6.3V
R77 100K
R76 47K
R75 3K
R74 100K
R73 47K
R72 3K
Z1
LSB
L3(J3) 0
C36 100μF 6.3V
L4 1μH
+5V(A)
+5V(D)
C37 220μF 6.3V
IC13(b)
IC12(a)
R69 100K
R70 100K
C46 33PF
R68 4.7K
28
R176 470
R177 15K
R178 15K
SW18
C86 0.1μF
C90 0.47μF 50V
R195 1K
R52~R54 1K×3
R53
R54
R52
30
29
C30 150PF
R58 27K
IC14
ADC2 ADC1 ADC0 NC ADSH AVss NC NC NC NC NC NC NC NC EXI P57
ADC3 DASH0 NC DASH1 NC VREF AVDD VDD P70 P71 P72 P73 P74 P75 P76 P77
DOWN UP ITEM PAGE REC TRIG RST OSC1 OSC2 Vss SYNC IN IRQ3 IRQ2 IRQ1 IRQ0
P40 P41 P42 P43 SEL A SEL B SEL C TXD RXD SB0 SB1 SBT TCIO 0 TCIO 1 PWM OUT
MSB
R128~R130 1K×3
R78~R85 1K×8
R128 R129 R78 R79 R80 R130 R81 R82 R83 R84 R85
R86 R87 R88
R86~R88 47K×3
71 72 73 15 13 21 19 17 11
R89 47K
R90 47K
R91 47K
R92 47K
R93 47K
81 82 83 84 85
R100 47K
R101 47K
R121 1K
R124 1K
R102 47K
R123 47K
91 92
R67 (J67) 0
R65 (J65) 0
X1
+9V
IC13(a)
C27 100PF
R139 1K
+5V(A)
+1V
+4V
C23 47μF 6.3V
R142 1K
R141 1K
R140 1K
R143 1K
44
IC8
Z4 Z6 ZOUT Z7 Z8 INH VEE VSS
VDD Z2 Z1 Z0 Z3 A B C
PAN FOCUS ZOOM TILT
47 46 45 48
71 72 73
27 R59 27K
25 R60 27K
23 R61 27K
26 R62 27K
24 R63 27K
+5V(A)
R57 27K
R64 27K
49
C44 0.47μF 50V
C52 0.1μF
D6
C49 0.1μF
R71 4.7K
Q1
R104 10K
D7
C53 0.1μF
D9
Q3
R109 1.8K
Q2
D8
R106 4.7K
R110 47K
IC15
R107 12K
R108 4.7K
C55 47μF 6.3V
C54 0.1μF 35V

OF MAIN BOARD FOR WV-CB700AE



NOT USED
TXD
RXD
SB0
SB1
SBT
V. SYNC
H. SYNC
IC2(a)
IC2(b)
IC2(d)
IC3(a)
IC3(b)
IC3(c)
IC3(d)
IC4(a)
IC4(b)
IC4(c)
IC4(d)
IC5(a)
IC5(b)
IC5(c)
IC5(e)
IC1
IC16
IC17(a)
Q7
D1
D2
D3
D4
D5
L1 10μH
L2 10μH
L4 1μH
C1 100μF 16V
C3 100μF 6.3V
C2 0.1μF
C4 47μF 6.3V
C5 100PF
C37 220μF 6.3V
R68 4.7K
+9V
+9V IN
+5V(D)
OUT
IN
CN1
ROP/RCU/ADP
TALLY CALL
GROUND
GEN-LOCK
GROUND
VIDEO 2
+8.8V
GROUND
TXD
RXD
CN10 RCB 10PIN CONNECTOR
CN2
GROUND
GEN-LOCK
GROUND
MONITOR
CN11 MONITOR OUTPUT CONNECTOR
CN12 GEN-LOCK CONNECTOR
CN4
TXD
RXD
+9V IN
NOT USED
NOT USED
NOT USED
GROUND
ROP/RCU/ADP
NOT USED
NOT USED
NOT USED
NOT USED
TALLY CALL
MONITOR
GROUND
To REMOTE CONTROL UNIT (RCU 15PIN CONNECTOR)
R211 220
R212
R213
R214
R215
R212~R215 NOT USED
R126 (J126) 0
R2(J2) 0
R1(J1) 0
7
8
9
10
11
12
13

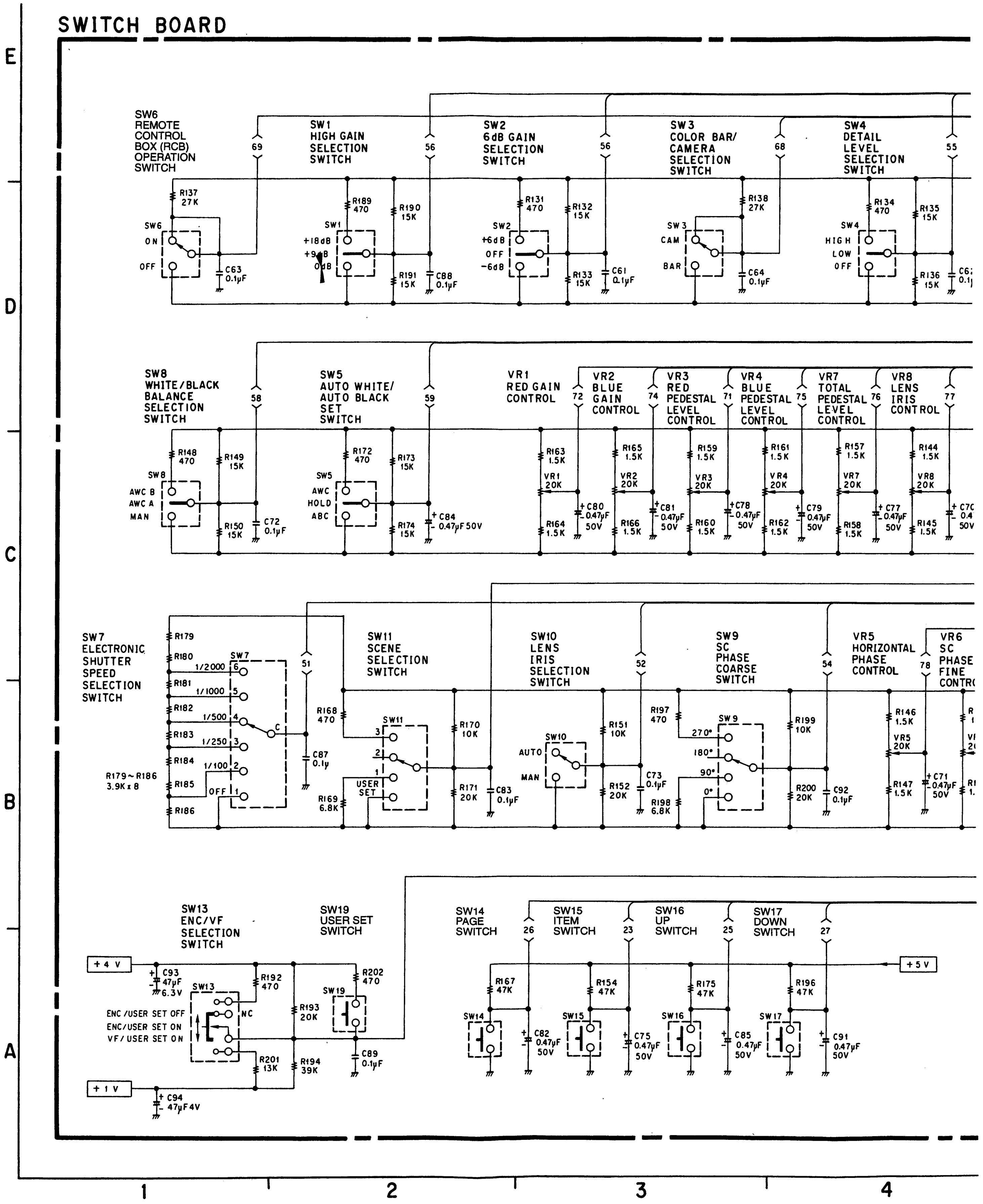
⟨Index⟩
MAIN BOARD

IC1	E11
IC2	D8, E8
IC3	C8, C9, D8, D9
IC4	D9, E9
IC8	B3
IC10	E3, D3
IC12	D7
IC13	B3, D7
IC14	C4
IC15	A7
Q1	A5
Q2	A6
Q3	B6
D1	E9
D3	D9
D6	B5
D7	A5
D8	A6
D9	B6

SCHEMATIC DIAGRAM OF SWITC

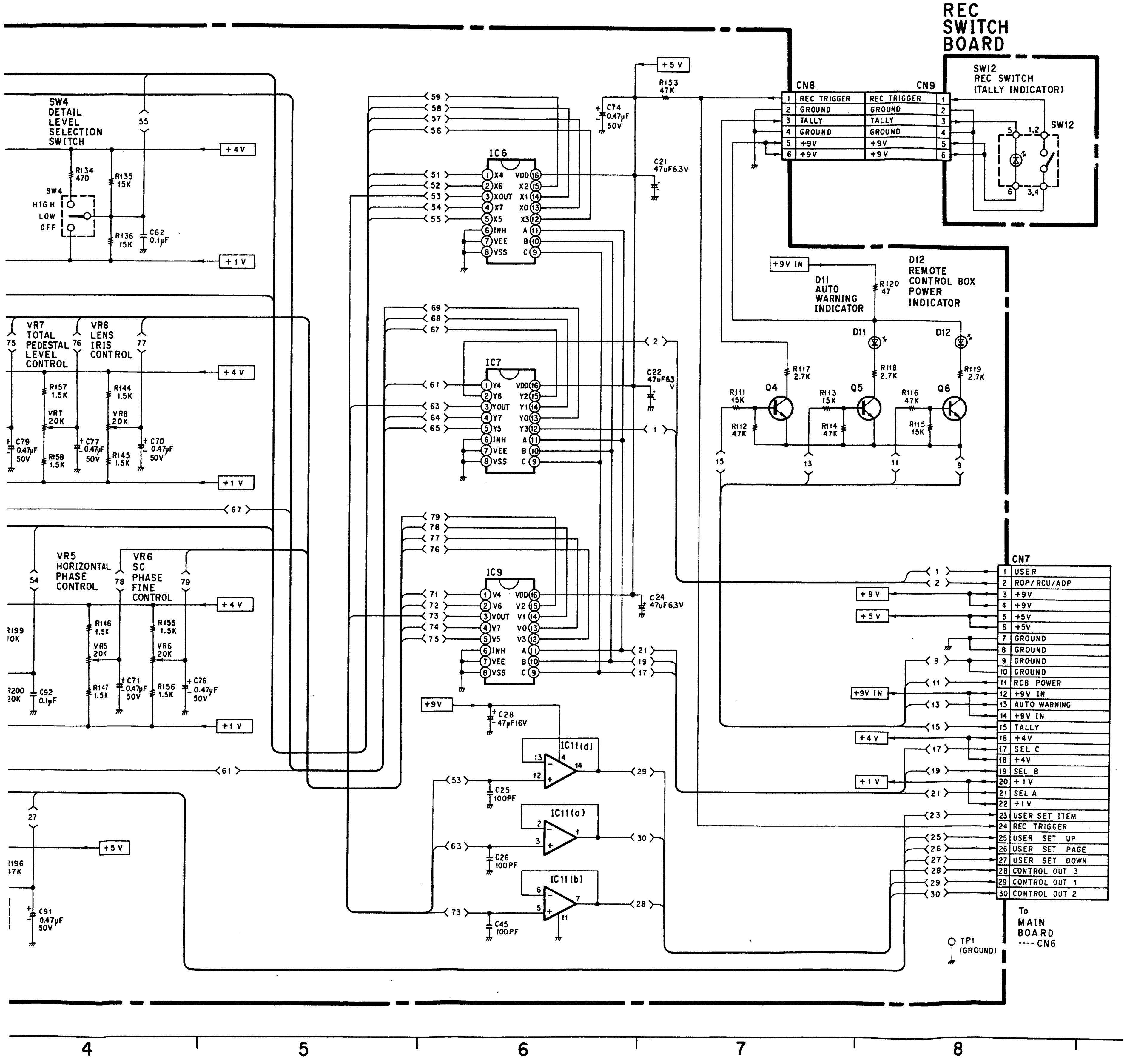
⟨Index⟩
SWITCH BOARD

IC6	D6
IC7	C6
IC9	B6
IC11	A6,B6
Q4	C7
Q5	C8
Q6	C8
D11	D8
D12	D8

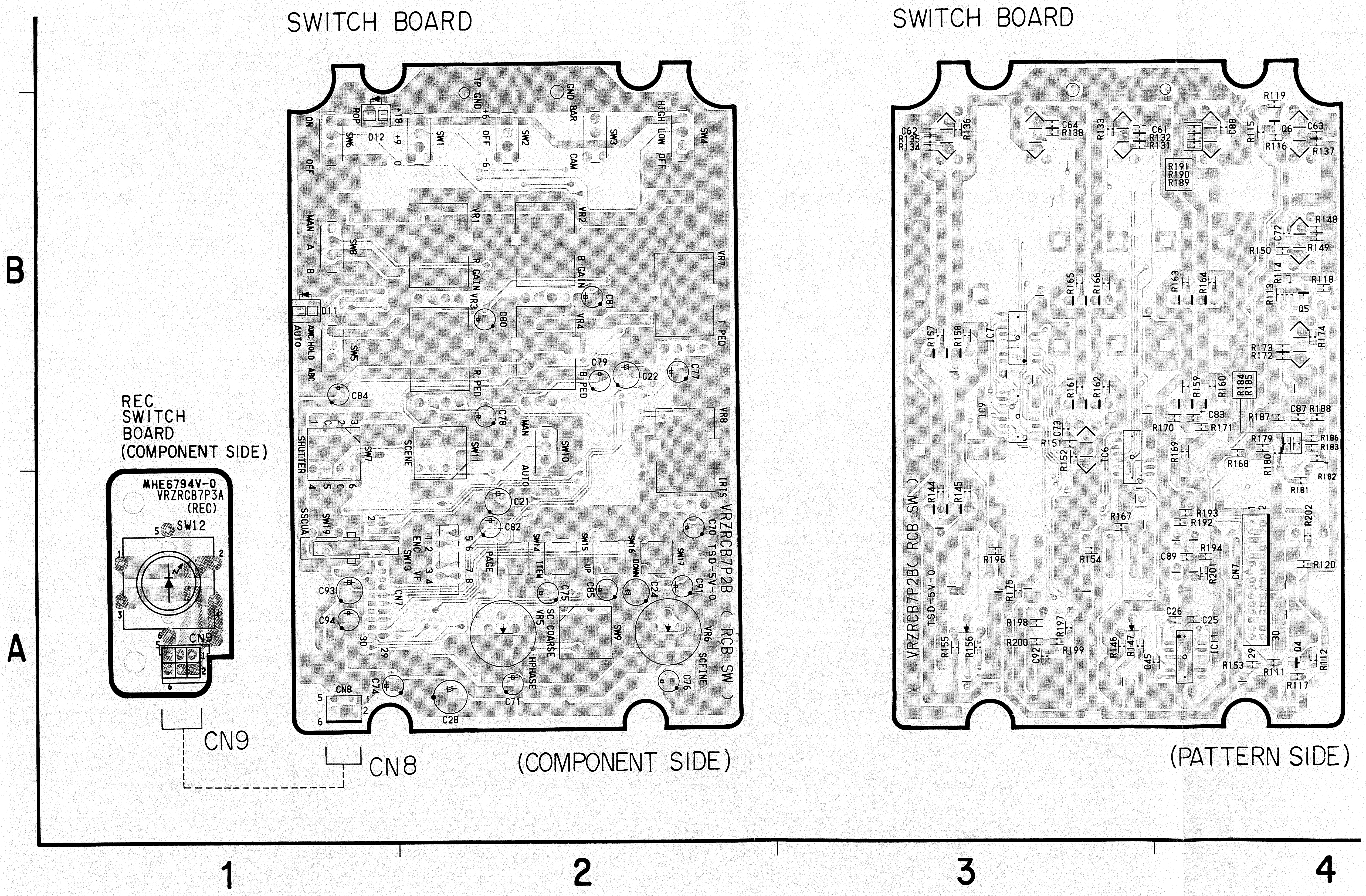


SWITCH BOARD
E
D
C
B
A
1
2
3
4
SW6 REMOTE CONTROL BOX (RCB) OPERATION SWITCH
SW1 HIGH GAIN SELECTION SWITCH
SW2 6dB GAIN SELECTION SWITCH
SW3 COLOR BAR/ CAMERA SELECTION SWITCH
SW4 DETAIL LEVEL SELECTION SWITCH
69
56
56
68
55
R137 27K
ON
OFF
C63 0.1μF
R189 470
R190 15K
+18dB
+9dB
0dB
R191 15K
C88 0.1μF
R131 470
R132 15K
+6dB
OFF
-6dB
R133 15K
C61 0.1μF
R138 27K
CAM
BAR
C64 0.1μF
R134 470
R135 15K
HIGH
LOW
OFF
R136 15K
SW8 WHITE/BLACK BALANCE SELECTION SWITCH
SW5 AUTO WHITE/ AUTO BLACK SET SWITCH
VR1 RED GAIN CONTROL
VR2 BLUE GAIN CONTROL
VR3 RED PEDESTAL LEVEL CONTROL
VR4 BLUE PEDESTAL LEVEL CONTROL
VR7 TOTAL PEDESTAL LEVEL CONTROL
VR8 LENS IRIS CONTROL
58
59
72
74
71
75
76
77
R148 470
R149 15K
AWC B
AWC A
MAN
R150 15K
C72 0.1μF
R172 470
R173 15K
AWC
HOLD
ABC
R174 15K
C84 0.47μF 50V
R163 1.5K
VR1 20K
C80 0.47μF 50V
R164 1.5K
R165 1.5K
VR2 20K
R166 1.5K
C81 0.47μF 50V
R159 1.5K
VR3 20K
R160 1.5K
C78 0.47μF 50V
R161 1.5K
VR4 20K
R162 1.5K
C79 0.47μF 50V
R157 1.5K
VR7 20K
R158 1.5K
C77 0.47μF 50V
R144 1.5K
VR8 20K
R145 1.5K
SW7 ELECTRONIC SHUTTER SPEED SELECTION SWITCH
R179
R180
R181
R182
R183
R184
R185
R186
R179~R186 3.9K x 8
1/2000
1/1000
1/500
1/250
1/100
OFF
51
R168 470
C87 0.1μ
R169 6.8K
SW11 SCENE SELECTION SWITCH
USER SET
R170 10K
R171 20K
C83 0.1μF
SW10 LENS IRIS SELECTION SWITCH
AUTO
MAN
52
R151 10K
R152 20K
C73 0.1μF
R197 470
R198 6.8K
SW9 SC PHASE COARSE SWITCH
270°
180°
90°
0°
54
R199 10K
R200 20K
C92 0.1μF
VR5 HORIZONTAL PHASE CONTROL
78
VR6 SC PHASE FINE CONTR
R146 1.5K
VR5 20K
R147 1.5K
C71 0.47μF 50V
SW13 ENC/VF SELECTION SWITCH
SW19 USER SET SWITCH
+4 V
+1 V
C93 47μF 6.3V
C94 47μF 4V
ENC/USER SET OFF
ENC/USER SET ON
VF/USER SET ON
NC
R192 470
R193 20K
R201 13K
R194 39K
R202 470
C89 0.1μF
SW14 PAGE SWITCH
SW15 ITEM SWITCH
SW16 UP SWITCH
SW17 DOWN SWITCH
26
23
25
27
+5 V
R167 47K
C82 0.47μF 50V
R154 47K
C75 0.47μF 50V
R175 47K
C85 0.47μF 50V
R196 47K
C91 0.47μF 50V

OF SWITCH BOARD FOR WV-CB700AE


REC SWITCH BOARD
SW12 REC SWITCH (TALLY INDICATOR)
SW12
CN8
CN9
1 REC TRIGGER
2 GROUND
3 TALLY
4 GROUND
5 +9V
6 +9V
SW4 DETAIL LEVEL SELECTION SWITCH
HIGH
LOW
OFF
R134 470
R135 15K
R136 15K
C62 0.1µF
+4V
+1V
+5V
R153 47K
C74 0.47µF 50V
C21 47µF6.3V
IC6
IC7
IC9
C22 47µF6.3V
C24 47µF6.3V
VR7 TOTAL PEDESTAL LEVEL CONTROL
VR8 LENS IRIS CONTROL
R157 1.5K
R144 1.5K
VR7 20K
VR8 20K
C79 0.47µF 50V
C77 0.47µF 50V
C70 0.47µF 50V
R158 1.5K
R145 1.5K
VR5 HORIZONTAL PHASE CONTROL
VR6 SC PHASE FINE CONTROL
R146 1.5K
R155 1.5K
VR5 20K
VR6 20K
R147 1.5K
C71 0.47µF 50V
R156 1.5K
C76 0.47µF 50V
C92 0.1µF
C91 0.47µF 50V
+9V IN
D11 AUTO WARNING INDICATOR
D12 REMOTE CONTROL BOX POWER INDICATOR
R120 47
D11
D12
R117 2.7K
R118 2.7K
R119 2.7K
Q4
Q5
Q6
R111 15K
R112 47K
R113 15K
R114 47K
R116 47K
R115 15K
+9V
C28 47µF16V
IC11(d)
IC11(a)
IC11(b)
C25 100PF
C26 100PF
C45 100PF
CN7
1 USER
2 ROP/RCU/ADP
3 +9V
4 +9V
5 +5V
6 +5V
7 GROUND
8 GROUND
9 GROUND
10 GROUND
11 RCB POWER
12 +9V IN
13 AUTO WARNING
14 +9V IN
15 TALLY
16 +4V
17 SEL C
18 +4V
19 SEL B
20 +1V
21 SEL A
22 +1V
23 USER SET ITEM
24 REC TRIGGER
25 USER SET UP
26 USER SET PAGE
27 USER SET DOWN
28 CONTROL OUT 3
29 CONTROL OUT 1
30 CONTROL OUT 2
To MAIN BOARD ---- CN6
TP1 (GROUND)
4
5
6
7
8

CONDUCTOR VIEW OF SWITCH BOARD WV-CB700AE


SWITCH BOARD
SWITCH BOARD
REC SWITCH BOARD (COMPONENT SIDE)
MHE6794V-0
VRZRCB7P3A
(REC)
SW12
CN9
CN8
(COMPONENT SIDE)
(PATTERN SIDE)
VRZRCB7P2B (RCB SW)
C70 TSD-5V-0
VRZRCB7P2B(RCB SW)
TSD-5V-0
TP GND
GND BAR
ROP
D12
D11
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW13
SW14
SW15
SW16
SW17
SW19
HIGH LOW OFF
CAM
ON OFF
MAN A B
AWC HOLD AUTO ABC
R GAIN VR3
B GAIN
VR1
VR2
VR4
VR5
VR6
VR7
VR8
R PED
B PED
T PED
IRIS
SHUTTER
SSCUA
SCENE
MAN AUTO
ENC VF
PAGE
ITEM
UP
DOWN
SC COARSE
HPHASE
SCFINE
IC6
IC7
IC9
IC11
CN7
Q4
Q5
Q6
B
A
1
2
3
4

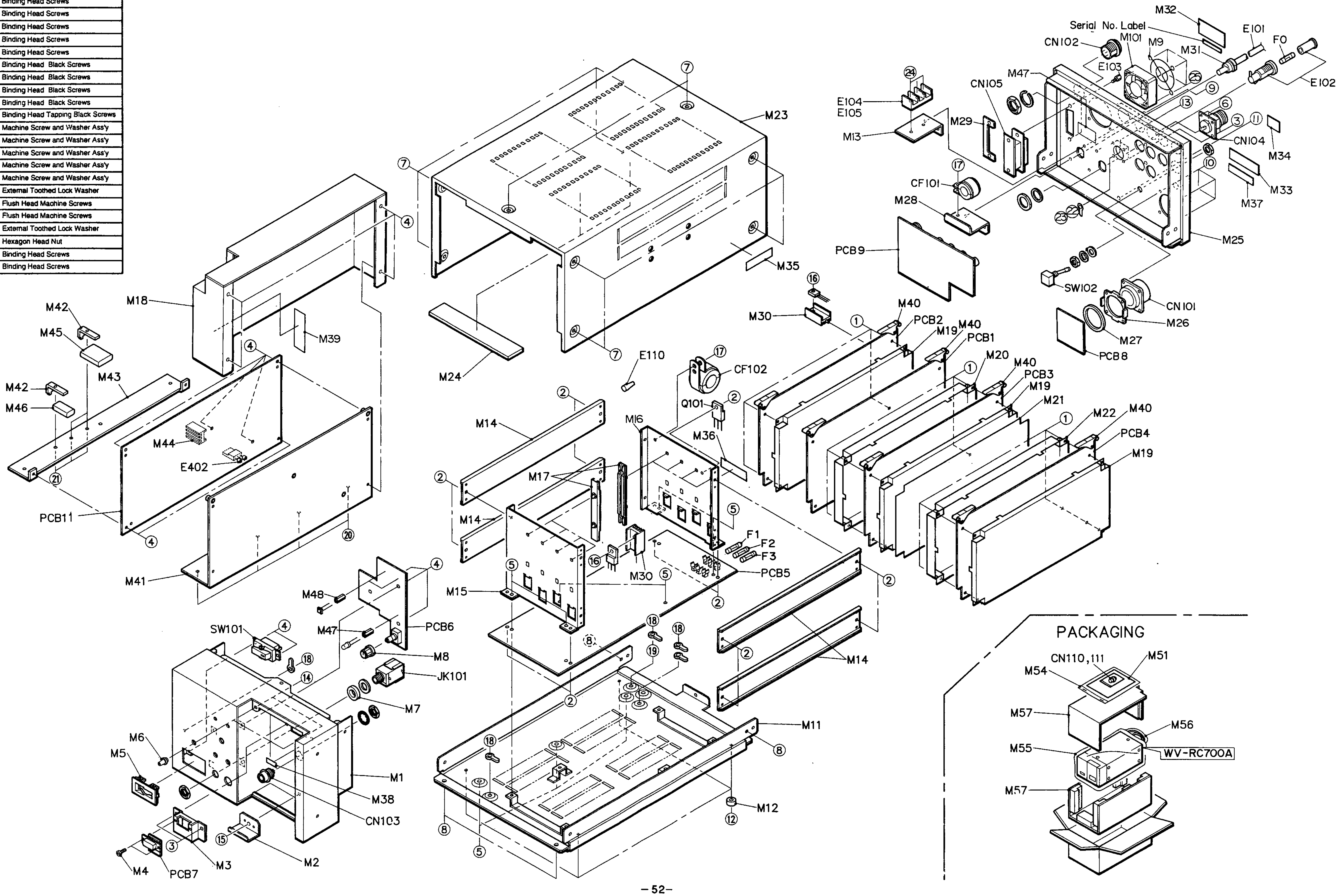
〈Index〉
SWITCH BOARD

IC6	B3
IC7	B3
IC9	B3
IC11	A4
Q4	A4
Q5	B4
Q6	B4
D11	B1
D12	B1

EXPLODED VIEW FOR WV-RC700A

○ Numbers show screws, washers, nuts, and etc.

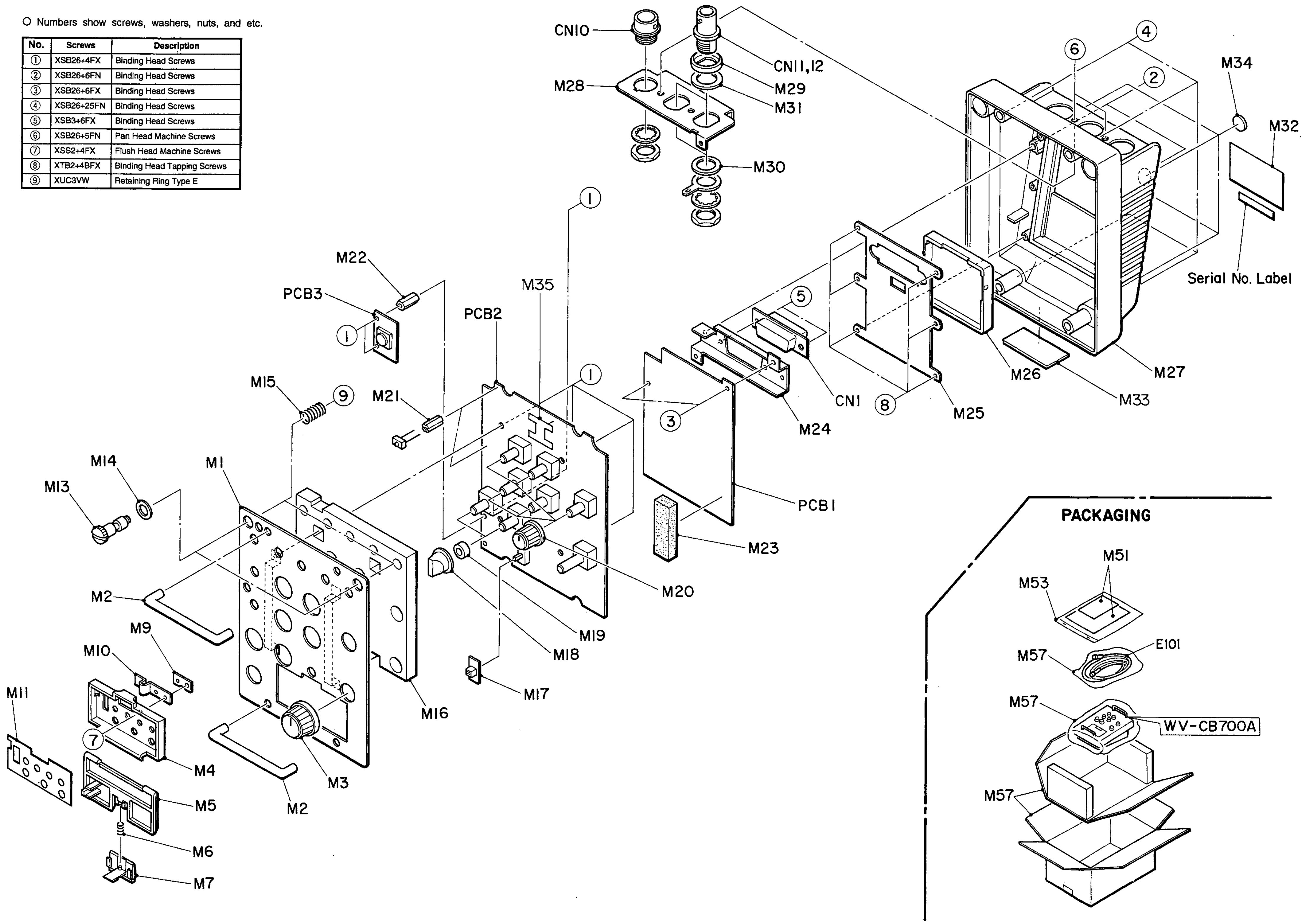
No.	Screws	Description
①	XSB26+6FX	Binding Head Screws
②	XSB3+5FX	Binding Head Screws
③	XSB3+6FN	Binding Head Screws
④	XSB3+6FX	Binding Head Screws
⑤	XSB3+8FX	Binding Head Screws
⑥	XSB3+10FN	Binding Head Screws
⑦	XSB4+6FN	Binding Head Screws
⑧	XSB4+6FX	Binding Head Screws
⑨	XSB3+6FXK	Binding Head Black Screws
⑩	XSB3+8FXK	Binding Head Black Screws
⑪	XSB4+6FXK	Binding Head Black Screws
⑫	XSB4+8FXK	Binding Head Black Screws
⑬	XTB3+10BFXK	Binding Head Tapping Black Screws
⑭	XYN3+F6FX	Machine Screw and Washer Ass'y
⑮	XYN3+F6FN	Machine Screw and Washer Ass'y
⑯	XYN3+F8FX	Machine Screw and Washer Ass'y
⑰	XYN3+F10FX	Machine Screw and Washer Ass'y
⑱	XYN4+F6FX	Machine Screw and Washer Ass'y
⑲	XWC4BFX	External Toothed Lock Washer
⑳	XSS3+6FX	Flush Head Machine Screws
㉑	XSS3+12FX	Flush Head Machine Screws
㉒	XWC3BFX	External Toothed Lock Washer
㉓	XNG3FX	Hexagon Head Nut
㉔	XSB3+12FX	Binding Head Screws
㉕	XSB3+18FN	Binding Head Screws


M32
Serial No. Label
E101
CN102
M101
M9
F0
M31
E103
M47
㉕
⑨
E102
㉔
CN105
⑬
⑥
E104
E105
③
⑪
M23
M29
CN104
M13
M34
⑩
⑦
M33
CF101
M37
⑰
M28
㉓
M25
⑦
④
PCB9
M35
⑯
SW102
M18
M42
M39
M30
M40
PCB2
CN101
M45
①
M19
M40
M26
④
PCB1
M27
⑦
E110
M43
M24
⑰
CF102
①
M20
PCB8
M42
M40
PCB3
M46
②
Q101
②
M19
M21
M14
M16
①
M22
M40
M44
M36
PCB4
E402
M19
②
M17
⑤
㉑
M14
F1
F2
PCB11
F3
⑤
⑯
④
M30
⑤
PCB5
②
⑳
②
M41
④
M48
M15
PCB6
SW101
④
M47
⑱
⑱
M8
⑧
⑱
⑲
JK101
⑭
②
M14
②
M7
M11
⑱
M6
⑧
M5
M1
M38
CN103
M12
⑫
③
⑮
⑧
M3
M2
M4
PCB7
⑤
PACKAGING
CN110,111
M51
M54
M57
M56
M55
WV-RC700A
M57

EXPLODED VIEW FOR WV-CB700AE

○ Numbers show screws, washers, nuts, and etc.

No.	Screws	Description
①	XSB26+4FX	Binding Head Screws
②	XSB26+6FN	Binding Head Screws
③	XSB26+6FX	Binding Head Screws
④	XSB26+25FN	Binding Head Screws
⑤	XSB3+6FX	Binding Head Screws
⑥	XSB26+5FN	Pan Head Machine Screws
⑦	XSS2+4FX	Flush Head Machine Screws
⑧	XTB2+4BFX	Binding Head Tapping Screws
⑨	XUC3VW	Retaining Ring Type E


CN10
CN11,12
M28
M29
M31
M30
⑥
④
②
M34
M32
Serial No. Label
①
M22
PCB3
①
PCB2
M35
①
⑤
M15
⑨
M21
③
CN1
⑧
M24
M25
M26
M27
M33
M14
M13
M1
PCB1
M23
M20
M19
M18
M17
M2
M9
M10
M11
⑦
M4
M5
M6
M7
M3
M2
M16
PACKAGING
M51
M53
M57
E101
M57
WV-CB700A
M57

REPLACEMENT PARTS LIST

Important Notice

1. Components identified by "⚠" mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. RTL : Retention Time Limited.

REMOTE CONTROL UNIT WV-RC700A

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
Q101	2SA1535-RS	Transistor
SW101	YWEST15147V	Power Switch
SW102	YWMTL7203G1	Cable Select Switch
CF101	YWTRCN16813	Filter
CF102	TRCN23111416	Filter
MO101	YWF412R12MB	Fan Motor
JK101	YWLJ194-1-1	Intercom Jack
CN102	YFCNR-1204J	4-pin Connector
CN103	HR10A10R10S	10-pin RCB Connector
CN104	YWNR	MPX Connector
F0,1	XBA2C12ET0A	Current Fuse 1.2A 250V
F2 ⚠	XBA2C31ET0A	Current Fuse 3.15A 250V
F3 ⚠	XBA2C08ET0A	Current Fuse 0.8A 250V
E101 ⚠	YWGTBS2R5B	AC Power Cord for WV-RC700A/B
	YWKPGTSA-3	AC Power Cord for WV-RC700A/A
	YWVM0309-08	AC Power Cord for WV-RC700A/G
E102	YFFH-B02	Fuse Holder
E103	YFHD-LNA	Holder
E104	YWML504G1	Terminal Board
E105	ML50S3EXS1P	Terminal-pin
E110	YFCD20ACCAP	Insulator Tube
M1	YWV2KB0700A1	Chassis
M2	YWV2SA1970A4	Mounting Angle
M3	YWV2SA1969A4	Mounting Angle
M4	YWV1EA0218A4	Special Screw
M5	YWV5EA0765A3	Cover
M6	YWV2JA0079A4	Bracing Strut
M7	YWV2NA0369A4	Spacer
M8	YWV5RA0279B3	Knob
M9	YWG402	Wind Screen
M10	YWV2TA0321A4	Connector Bracket
M11	YWV2KA0702A1	Bottom Case
M12	YWK17N0-7039	Rubber Foot
M13	YWV2SA2237A4	Mounting Angle
M14	YWV2SA1971A3	Mounting Plate
M15	YWV2SA1972A3	Front Mounting Angle
M16	YWV2SA1973A3	Rear Mounting Angle
M17	YWGR80S	Guide
M18	YWV5EA1049A1	Power Cover
M21	YWV2PA0480A3	Insulator
M23	YWV5EA1048A1	Upper Cover
M24	YWV2FA0539A4	Cushion
M25	YWV2KC0840A2	Rear Chassis
M28	YWV2SA1968A4	Mounting Angle
M29	YWV2SA2532A4	Connector Mounting Plate
M31	YWSR6W1	Cord Clamp
M32 ⚠	YWV7QA3064A4	Main Label for WV-RC700A/G
	YWV7QA3065A4	Main Label for WV-RC700A/A
	YWV7QA3066A4	Main Label for WV-RC700A/B
M33	YWV7MA0081A4	Fuse Change Label
M34	YWV7MA0338A4	SEE Manual Label
M35	YFV7MB0099A4	Safety Label
M36	YWV7MA0429A4	Fuse Change Label
M37	YWV7MA0015A4	Safety Label
M38	YWV7SA1431A4	RCB Label
M39	YWV2PA0592A4	Insulator Sheet
M47	YWV7MA0428A4	Safety Label

VIDEO BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB1 (RTL)	YWVKZRC7AE1A	Printed Circuit Board Assy
IC1	YWUPD4053BG	IC
IC2	YWLM1881M	IC
IC3	YWUPD4528BG	IC
IC4	YWUPC4064G2	IC
IC5	YWUPC4062G2	IC
IC6	NJM1496M	IC
IC7-9	YWTC4S66FR	IC
IC10	NJM1496M	IC
IC11	YWCX20095A	IC
IC201	YWUPC4062G2	IC
IC202,203	NJM1496M	IC
IC204	YWNJM2243M	IC
IC301	YWUPC4062G2	IC
IC302,303	NJM1496M	IC
IC304	YWNJM2243M	IC
IC401	YWUPC4062G2	IC
IC402,403	NJM1496M	IC
IC404	YWCX20095A	IC
IC501	NJM2903M	IC
IC502	YWCX20095A	IC
IC601	YWLM1881M	IC
IC602	YWUPD4001BG	IC
IC603	YWUPD4053BG	IC
IC701	YWUPD4001BG	IC
IC702	YWUPD4071BG	IC
IC703	YWUPD4001BG	IC
IC704,705	YWUPD4081BG	IC
IC801	NJM386M	IC
IC802	NJM2904M	IC
IC803,804	YWTC4S66FR	IC
Q1-3	2SC2404-CD	Transistor
Q4	2SD601-RS	Transistor
Q5	2SB709-RS	Transistor
Q6-12	2SD601-RS	Transistor
Q13,14	2SC2404-CD	Transistor
Q15	2SD601-RS	Transistor
Q16	2SK198-P	Transistor
Q17	2SB709-RS	Transistor
Q18,19	2SD601-RS	Transistor
Q20	2SB709-RS	Transistor
Q21,22	2SD601-RS	Transistor
Q23	2SC2404-CD	Transistor
Q24	2SD601-RS	Transistor
Q201-203	2SC2404-CD	Transistor
Q204-208	2SD601-RS	Transistor
Q209,210	2SC2404-CD	Transistor
Q211	2SD601-RS	Transistor
Q212	2SK198-P	Transistor,
Q213	2SB709-RS	Transistor
Q214,215	2SD601-RS	Transistor
Q216	2SB709-RS	Transistor
Q217	2SD601-RS	Transistor
Q301-303	2SC2404-CD	Transistor
Q304-308	2SD601-RS	Transistor
Q309,310	2SC2404-CD	Transistor
Q311	2SD601-RS	Transistor
Q312	2SK198-P	Transistor
Q313	2SB709-RS	Transistor
Q314,315	2SD601-RS	Transistor
Q316	2SB709-RS	Transistor
Q317	2SD601-RS	Transistor
Q401-403	2SC2404-CD	Transistor
Q404-408	2SD601-RS	Transistor
Q409,410	2SC2404-CD	Transistor
Q411	2SD601-RS	Transistor
Q412	2SK198-P	Transistor
Q413	2SB709-RS	Transistor
Q414,415	2SD601-RS	Transistor
Q416	2SB709-RS	Transistor
Q417,418	2SD601-RS	Transistor
Q501	2SD601-RS	Transistor
Q502	2SK198-P	Transistor
Q503,504	2SD601-RS	Transistor
Q601	2SD601-RS	Transistor
Q602	2SB709-RS	Transistor
Q603-606	2SD601-RS	Transistor
Q607	2SK198-P	Transistor
Q608-610	2SD601-RS	Transistor
Q611	2SD602-Q	Transistor
Q612	2SB710-QRS	Transistor
Q701-706	2SD601-RS	Transistor
Q801-805	2SD601-RS	Transistor
Q901-903	2SD601-RS	Transistor
D1,2	MA151K	Diode
D201,301	MA151K	Diode
D401,801	MA151K	Diode
R1	YF2116750JT	Carbon 75 ohms 1/10W
R2	ERJ6GEYJ223	Carbon 22K ohms 1/10W
R3	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R4	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R5	YF2116752JT	Carbon 7.5K ohms 1/10W
R6	YF2116113JT	Carbon 11K ohms 1/10W
R7	YF2116362JT	Carbon 3.6K ohms 1/10W
R8	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R9	YF2116152JT	Carbon 1.5K ohms 1/10W
R10	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R11	YF2116221JT	Carbon 220 ohms 1/10W
R12	YF2116272JT	Carbon 2.7K ohms 1/10W
R13	YF2116183GT	Carbon 18K ohms 1/10W
R14	YF2116153JT	Carbon 15K ohms 1/10W
R15	YF2116122JT	Carbon 1.2K ohms 1/10W
R17	YF2116224JT	Carbon 220K ohms 1/10W
R18	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R19	YF2116101JT	Carbon 100 ohms 1/10W
R20	YF2116564JT	Carbon 560K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R21	YF2116204JT	Carbon	200K ohms 1/10W
R22	YF2116563JT	Carbon	56K ohms 1/10W
R23	YF2116153JT	Carbon	15K ohms 1/10W
R24	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R25	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R26	YF2116202JT	Carbon	2K ohms 1/10W
R27	YF2116332JT	Carbon	3.3K ohms 1/10W
R28	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R29	YF2116272JT	Carbon	2.7K ohms 1/10W
R30	YF2116122JT	Carbon	1.2K ohms 1/10W
R31	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R32	YWR1220P332D	Metal	3.3K ohms
R33	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R34	YWR1220P102D	Metal	1K ohms
R35	YWR1220P471D	Metal	470 ohms
R36	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R37	R1220P822D	Metal	8.2K ohms
R38	YWR1220P101D	Metal	100 ohms
R39	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R40	YWR1220P301D	Metal	300 ohms
R42	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R43	YWR1220P391D	Metal	390 ohms
R44	R1220P123D	Metal	12K ohms
R45	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R46	YWR1220P122D	Metal	1.2K ohms
R47	YWR1220P103D	Metal	10K ohms
R49	YFR1220P392D	Metal	3.9K ohms
R50	YWR1220P562D	Metal	5.6K ohms
R51	YF2116561JT	Carbon	560 ohms 1/10W
R52	YF2116471JT	Carbon	470 ohms 1/10W
R53	YF2116681JT	Carbon	680 ohms 1/10W
R54,55	YF2116821GT	Carbon	820 ohms 1/10W
R56	YF2116201JT	Carbon	200 ohms 1/10W
R57	YF2116241JT	Carbon	240 ohms 1/10W
R58,59	YF2116822JT	Carbon	8.2K ohms 1/10W
R60	YF2116303GT	Carbon	30K ohms 1/10W
R61	YF2116333GT	Carbon	33K ohms 1/10W
R62	YF2116153JT	Carbon	15K ohms 1/10W
R63	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R64	R1220P133D	Metal	13K ohms
R65,66	R1220P681D	Metal	680 ohms
R67	YWR1220P362D	Metal	3.6K ohms
R68	YW2116182JT	Carbon	1.8K ohms 1/10W
R69	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R70	YF2116333GT	Carbon	33K ohms 1/10W
R71	YF2116153JT	Carbon	15K ohms 1/10W
R72	YF2116222GT	Carbon	2.2K ohms 1/10W
R73	YF2116561JT	Carbon	560 ohms 1/10W
R74	YF2116132JT	Carbon	1.3K ohms 1/10W
R75	YF2116561JT	Carbon	560 ohms 1/10W
R76,77	YF2116331JT	Carbon	330 ohms 1/10W
R78	YF2116101JT	Carbon	100 ohms 1/10W
R79,80	YF2116271JT	Carbon	270 ohms 1/10W
R81	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R82	YWR1220P472D	Metal	4.7K ohms

REF.NO.	PART NO.	DESCRIPTION	
R83	YWR1220P562D	Metal	5.6K ohms
R84	YF2116272JT	Carbon	2.7K ohms 1/10W
R85	YF2116222GT	Carbon	2.2K ohms 1/10W
R86	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R87	YF2116183GT	Carbon	18K ohms 1/10W
R88	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R89	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R90	YF2116821GT	Carbon	820 ohms 1/10W
R92	YF2116751JT	Carbon	750 ohms 1/10W
R93	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R94	YF2116183GT	Carbon	18K ohms 1/10W
R95	YF2116752JT	Carbon	7.5K ohms 1/10W
R96	YF2116682JT	Carbon	6.8K ohms 1/10W
R97	YF2116681JT	Carbon	680 ohms 1/10W
R98	YF2116221JT	Carbon	220 ohms 1/10W
R99	YF2116272JT	Carbon	2.7K ohms 1/10W
R100	YF2116750JT	Carbon	75 ohms 1/10W
R101,102	YWR1220P332D	Metal	3.3K ohms
R103	YF2116750JT	Carbon	75 ohms 1/10W
R104	YWR1220P362D	Metal	3.6K ohms
R105	YWR1220P332D	Metal	3.3K ohms
R106	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R107	YF2116101JT	Carbon	100 ohms 1/10W
R108,109	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R110	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R111,112	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R114	YF2116122JT	Carbon	1.2K ohms 1/10W
R115	YF2116272JT	Carbon	2.7K ohms 1/10W
R116	YWR1220P202D	Metal	2K ohms
R117	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R118	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R201	YF2116750JT	Carbon	75 ohms 1/10W
R202	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R203	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R204	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R205	YF2116752JT	Carbon	7.5K ohms 1/10W
R206	YF2116113JT	Carbon	11K ohms 1/10W
R207	YF2116362JT	Carbon	3.6K ohms 1/10W
R208	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R209	YF2116152JT	Carbon	1.5K ohms 1/10W
R210	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R211	YF2116221JT	Carbon	220 ohms 1/10W
R212	YF2116272JT	Carbon	2.7K ohms 1/10W
R213	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R214	YWR1220Q750D	Metal	75 ohms
R215	YWR1220P102D	Metal	1K ohms
R216	YWR1220P471D	Metal	470 ohms
R217	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R218	R1220P822D	Metal	8.2K ohms
R219	YWR1220P101D	Metal	100 ohms
R220	YWR1220P301D	Metal	300 ohms
R222	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R223	YWR1220P391D	Metal	390 ohms
R224	R1220P123D	Metal	12K ohms
R225	YWR1220P122D	Metal	1.2K ohms

REF.NO.	PART NO.	DESCRIPTION	
R226	YWR1220P103D	Metal	10K ohms
R228	YF2116183GT	Carbon	18K ohms 1/10W
R229	YF2116153JT	Carbon	15K ohms 1/10W
R230	YF2116122JT	Carbon	1.2K ohms 1/10W
R231	YWR1220P562D	Metal	5.6K ohms
R232	YFR1220P392D	Metal	3.9K ohms
R233	YF2116561JT	Carbon	560 ohms 1/10W
R234	YF2116471JT	Carbon	470 ohms 1/10W
R235	YF2116681JT	Carbon	680 ohms 1/10W
R236,237	YF2116821GT	Carbon	820 ohms 1/10W
R238	YF2116201JT	Carbon	200 ohms 1/10W
R239	YF2116241JT	Carbon	240 ohms 1/10W
R240,241	YF2116822JT	Carbon	8.2K ohms 1/10W
R242	YF2116303GT	Carbon	30K ohms 1/10W
R243	YF2116333GT	Carbon	33K ohms 1/10W
R244	YF2116153JT	Carbon	15K ohms 1/10W
R245	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R246	YF2116362JT	Carbon	3.6K ohms 1/10W
R247	YWR1220P202D	Metal	2K ohms
R248	YW2116182JT	Carbon	1.8K ohms 1/10W
R249	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R250	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R251	YF2116333GT	Carbon	33K ohms 1/10W
R252	YF2116153JT	Carbon	15K ohms 1/10W
R253	YF2116222GT	Carbon	2.2K ohms 1/10W
R254	YF2116561JT	Carbon	560 ohms 1/10W
R255	YF2116132JT	Carbon	1.3K ohms 1/10W
R256	YF2116561JT	Carbon	560 ohms 1/10W
R257,258	YF2116331JT	Carbon	330 ohms 1/10W
R259	YF2116101JT	Carbon	100 ohms 1/10W
R260,261	YF2116271JT	Carbon	270 ohms 1/10W
R262	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R263	YWR1220P472D	Metal	4.7K ohms
R264	YWR1220P562D	Metal	5.6K ohms
R265	YF2116222GT	Carbon	2.2K ohms 1/10W
R266	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R267	YF2116183GT	Carbon	18K ohms 1/10W
R268	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R269	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R270	YF2116821GT	Carbon	820 ohms 1/10W
R272	YF2116751JT	Carbon	750 ohms 1/10W
R273	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R274	YF2116183GT	Carbon	18K ohms 1/10W
R275	YF2116752JT	Carbon	7.5K ohms 1/10W
R276	YF2116682JT	Carbon	6.8K ohms 1/10W
R277	YF2116681JT	Carbon	680 ohms 1/10W
R278	YF2116221JT	Carbon	220 ohms 1/10W
R279	YF2116272JT	Carbon	2.7K ohms 1/10W
R280	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R281	YF2116750JT	Carbon	75 ohms 1/10W
R282	YF2116101JT	Carbon	100 ohms 1/10W
R283	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R284	YWR1220P472D	Metal	4.7K ohms
R301	YF2116750JT	Carbon	75 ohms 1/10W
R302	ERJ6GEYJ223	Carbon	22K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R303	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R304	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R305	YF2116752JT	Carbon	7.5K ohms 1/10W
R306	YF2116113JT	Carbon	11K ohms 1/10W
R307	YF2116362JT	Carbon	3.6K ohms 1/10W
R308	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R309	YF2116152JT	Carbon	1.5K ohms 1/10W
R310	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R311	YF2116221JT	Carbon	220 ohms 1/10W
R312	YF2116272JT	Carbon	2.7K ohms 1/10W
R313	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R314	YWR1220Q750D	Metal	75 ohms
R315	YWR1220P102D	Metal	1K ohms
R316	YWR1220P471D	Metal	470 ohms
R317	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R318	R1220P822D	Metal	8.2K ohms
R319	YWR1220P101D	Metal	100 ohms
R320	YWR1220P301D	Metal	300 ohms
R322	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R323	YWR1220P391D	Metal	390 ohms
R324	R1220P123D	Metal	12K ohms
R325	YWR1220P122D	Metal	1.2K ohms
R326	YWR1220P103D	Metal	10K ohms
R328	YF2116183GT	Carbon	18K ohms 1/10W
R329	YF2116153JT	Carbon	15K ohms 1/10W
R330	YF2116122JT	Carbon	1.2K ohms 1/10W
R331	YWR1220P562D	Metal	5.6K ohms
R332	YFR1220P392D	Metal	3.9K ohms
R333	YF2116561JT	Carbon	560 ohms 1/10W
R334	YF2116471JT	Carbon	470 ohms 1/10W
R335	YF2116681JT	Carbon	680 ohms 1/10W
R336,337	YF2116821GT	Carbon	820 ohms 1/10W
R338	YF2116201JT	Carbon	200 ohms 1/10W
R339	YF2116241JT	Carbon	240 ohms 1/10W
R340,341	YF2116822JT	Carbon	8.2K ohms 1/10W
R342	YF2116303GT	Carbon	30K ohms 1/10W
R343	YF2116333GT	Carbon	33K ohms 1/10W
R344	YF2116153JT	Carbon	15K ohms 1/10W
R345	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R346	YF2116362JT	Carbon	3.6K ohms 1/10W
R347	YWR1220P202D	Metal	2K ohms
R348	YW2116182JT	Carbon	1.8K ohms 1/10W
R349	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R350	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R351	YF2116333GT	Carbon	33K ohms 1/10W
R352	YF2116153JT	Carbon	15K ohms 1/10W
R353	YF2116222GT	Carbon	2.2K ohms 1/10W
R354	YF2116561JT	Carbon	560 ohms 1/10W
R355	YF2116132JT	Carbon	1.3K ohms 1/10W
R356	YF2116561JT	Carbon	560 ohms 1/10W
R357,358	YF2116331JT	Carbon	330 ohms 1/10W
R359	YF2116101JT	Carbon	100 ohms 1/10W
R360,361	YF2116271JT	Carbon	270 ohms 1/10W
R362	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R363	YWR1220P472D	Metal	4.7K ohms

REF.NO.	PART NO.	DESCRIPTION		REF.NO.	PART NO.	DESCRIPTION	
R364	YWR1220P562D	Metal	5.6K ohms	R439	YF2116241JT	Carbon	240 ohms 1/10W
R365	YF2116222GT	Carbon	2.2K ohms 1/10W	R440,441	YF2116822JT	Carbon	8.2K ohms 1/10W
R366	ERJ6GEYJ223	Carbon	22K ohms 1/10W	R442	YF2116303GT	Carbon	30K ohms 1/10W
R367	YF2116183GT	Carbon	18K ohms 1/10W	R443	YF2116333GT	Carbon	33K ohms 1/10W
R368	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R444	YF2116153JT	Carbon	15K ohms 1/10W
R369	ERJ6GEYJ102	Carbon	1K ohms 1/10W	R445	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R370	YF2116821GT	Carbon	820 ohms 1/10W	R446	YF2116362JT	Carbon	3.6K ohms 1/10W
R372	YF2116751JT	Carbon	750 ohms 1/10W	R447	YWR1220P202D	Metal	2K ohms
R373	ERJ6GEYJ223	Carbon	22K ohms 1/10W	R448	YW2116182JT	Carbon	1.8K ohms 1/10W
R374	YF2116183GT	Carbon	18K ohms 1/10W	R449	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R375	YF2116752JT	Carbon	7.5K ohms 1/10W	R450	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R376	YF2116682JT	Carbon	6.8K ohms 1/10W	R451	YF2116333GT	Carbon	33K ohms 1/10W
R377	YF2116681JT	Carbon	680 ohms 1/10W	R452	YF2116153JT	Carbon	15K ohms 1/10W
R378	YF2116221JT	Carbon	220 ohms 1/10W	R453	YF2116222GT	Carbon	2.2K ohms 1/10W
R379	YF2116272JT	Carbon	2.7K ohms 1/10W	R454	YF2116561JT	Carbon	560 ohms 1/10W
R380	ERJ6GEYJ223	Carbon	22K ohms 1/10W	R455	YF2116132JT	Carbon	1.3K ohms 1/10W
R381	YF2116750JT	Carbon	75 ohms 1/10W	R456	YF2116561JT	Carbon	560 ohms 1/10W
R382	YF2116101JT	Carbon	100 ohms 1/10W	R457,458	YF2116331JT	Carbon	330 ohms 1/10W
R383	ERJ6GEY0R00	Carbon	0 ohms 1/10W	R459	YF2116101JT	Carbon	100 ohms 1/10W
R384	YWR1220P472D	Metal	4.7K ohms	R460,461	YF2116271JT	Carbon	270 ohms 1/10W
R401	YF2116750JT	Carbon	75 ohms 1/10W	R462	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R402	ERJ6GEYJ223	Carbon	22K ohms 1/10W	R463	YWR1220P472D	Metal	4.7K ohms
R403	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R464	YWR1220P562D	Metal	5.6K ohms
R404	ERJ6GEYJ102	Carbon	1K ohms 1/10W	R465	YF2116222GT	Carbon	2.2K ohms 1/10W
R405	YF2116752JT	Carbon	7.5K ohms 1/10W	R466	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R406	YF2116113JT	Carbon	11K ohms 1/10W	R467	YF2116183GT	Carbon	18K ohms 1/10W
R407	YF2116362JT	Carbon	3.6K ohms 1/10W	R468	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R408	ERJ6GEY0R00	Carbon	0 ohms 1/10W	R469	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R409	YF2116152JT	Carbon	1.5K ohms 1/10W	R470	YF2116821GT	Carbon	820 ohms 1/10W
R410	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W	R472	YF2116751JT	Carbon	750 ohms 1/10W
R411	YF2116221JT	Carbon	220 ohms 1/10W	R473	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R412	YF2116272JT	Carbon	2.7K ohms 1/10W	R474	YF2116183GT	Carbon	18K ohms 1/10W
R413	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R475	YF2116752JT	Carbon	7.5K ohms 1/10W
R414	YWR1220Q750D	Metal	75 ohms	R476	YF2116682JT	Carbon	6.8K ohms 1/10W
R415	YWR1220P102D	Metal	1K ohms	R477	YF2116681JT	Carbon	680 ohms 1/10W
R416	YWR1220P471D	Metal	470 ohms	R478	YF2116221JT	Carbon	220 ohms 1/10W
R417	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R479	YF2116272JT	Carbon	2.7K ohms 1/10W
R418	R1220P822D	Metal	8.2K ohms	R480	YF2116750JT	Carbon	75 ohms 1/10W
R419	YWR1220P101D	Metal	100 ohms	R481,482	YWR1220P332D	Metal	3.3K ohms
R420	YWR1220P301D	Metal	300 ohms	R483	YF2116101JT	Carbon	100 ohms 1/10W
R422	ERJ6GEYJ103	Carbon	10K ohms 1/10W	R484	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R423	YWR1220P391D	Metal	390 ohms	R485	YWR1220P472D	Metal	4.7K ohms
R424	R1220P123D	Metal	12K ohms	R486	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R425	YWR1220P122D	Metal	1.2K ohms	R501	YF2116273GT	Carbon	27K ohms 1/10W
R426	YWR1220P103D	Metal	10K ohms	R502	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R428	YF2116183GT	Carbon	18K ohms 1/10W	R503	YW2116182JT	Carbon	1.8K ohms 1/10W
R429	YF2116153JT	Carbon	15K ohms 1/10W	R504	YF2116222GT	Carbon	2.2K ohms 1/10W
R430	YF2116122JT	Carbon	1.2K ohms 1/10W	R505	YF2116183GT	Carbon	18K ohms 1/10W
R431	YWR1220P562D	Metal	5.6K ohms	R506	YF2116104JT	Carbon	100K ohms 1/10W
R432	YFR1220P392D	Metal	3.9K ohms	R507	YF2116432JT	Carbon	4.3K ohms 1/10W
R433	YF2116561JT	Carbon	560 ohms 1/10W	R508	YW2116182JT	Carbon	1.8K ohms 1/10W
R434	YF2116471JT	Carbon	470 ohms 1/10W	R509	YF2116273GT	Carbon	27K ohms 1/10W
R435	YF2116681JT	Carbon	680 ohms 1/10W	R510	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R436,437	YF2116821GT	Carbon	820 ohms 1/10W	R511	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R438	YF2116201JT	Carbon	200 ohms 1/10W	R512	YF2116272JT	Carbon	2.7K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION
R513	YWR1220P183D	Metal 18K ohms
R514	YWR1220P243D	Metal 24K ohms
R515	YF2116333GT	Carbon 33K ohms 1/10W
R516	YF2116750JT	Carbon 75 ohms 1/10W
R517,518	YF2116332JT	Carbon 3.3K ohms 1/10W
R601	YF2116273GT	Carbon 27K ohms 1/10W
R602	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R603	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R604	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R605	YF2116564JT	Carbon 560K ohms 1/10W
R606	YF2116272JT	Carbon 2.7K ohms 1/10W
R607	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R608	YF2116272JT	Carbon 2.7K ohms 1/10W
R609	YF2116682JT	Carbon 6.8K ohms 1/10W
R610	YF2116222GT	Carbon 2.2K ohms 1/10W
R611	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R612	YF2116222GT	Carbon 2.2K ohms 1/10W
R613	YF2116821GT	Carbon 820 ohms 1/10W
R614	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R615	YF2116152JT	Carbon 1.5K ohms 1/10W
R616	YF2116512JT	Carbon 5.1K ohms 1/10W
R617	YF2116272JT	Carbon 2.7K ohms 1/10W
R618	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R619	YF2116104JT	Carbon 100K ohms 1/10W
R620	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R621	YF2116152JT	Carbon 1.5K ohms 1/10W
R622	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R623	YF2116273GT	Carbon 27K ohms 1/10W
R624	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R625	YF2116272JT	Carbon 2.7K ohms 1/10W
R626,627	YF2116332JT	Carbon 3.3K ohms 1/10W
R628	YF2116750JT	Carbon 75 ohms 1/10W
R629	YF2116152JT	Carbon 1.5K ohms 1/10W
R630	YF2116153JT	Carbon 15K ohms 1/10W
R631	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R632	YF2116222GT	Carbon 2.2K ohms 1/10W
R633	YF2116100JT	Carbon 10 ohms 1/10W
R634,635	YF2116330JT	Carbon 33 ohms 1/10W
R636	ERJ6GEYJ223	Carbon 22K ohms 1/10W
R637	YF2116750JT	Carbon 75 ohms 1/10W
R638	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R701	YF2116104JT	Carbon 100K ohms 1/10W
R702	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R703	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R704	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R705	YF2116101JT	Carbon 100 ohms 1/10W
R706	YF2116104JT	Carbon 100K ohms 1/10W
R707	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R708	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R709	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R710	YF2116101JT	Carbon 100 ohms 1/10W
R711	YF2116104JT	Carbon 100K ohms 1/10W
R712	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R713	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R714	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R715	YF2116101JT	Carbon 100 ohms 1/10W
R801,802	YF2116331JT	Carbon 330 ohms 1/10W
R803	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R804	YF2116821GT	Carbon 820 ohms 1/10W
R805	YF2116331JT	Carbon 330 ohms 1/10W
R806	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R807	YF2116333GT	Carbon 33K ohms 1/10W
R808	ERG1SJ271	Metal 270 ohms 1W
R809	YF2116333GT	Carbon 33K ohms 1/10W
R810	ERJ6GEYJ393	Carbon 39K ohms 1/10W
R811	YF2116332JT	Carbon 3.3K ohms 1/10W
R812-814	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R815,816	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R817	ERDS2FJ101	Carbon 100 ohms 1/4W
R818	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R819	YF2116101JT	Carbon 100 ohms 1/10W
R820	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R821	YF2116104JT	Carbon 100K ohms 1/10W
R822	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R823	YF2116273GT	Carbon 27K ohms 1/10W
R824	YF2116513JT	Carbon 51K ohms 1/10W
R825	YF2116824JT	Carbon 820K ohms 1/10W
R826	ERDS2TJ300	Carbon 30 ohms 1/4W
R827	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R828	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R829	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R830	ERJ6GEYJ562	Carbon 5.6K ohms 1/10W
R831	ERJ6GEYJ102	Carbon 1K ohms 1/10W
R832	ERJ6GEYJ472	Carbon 4.7K ohms 1/16W
R833,834	ERJ6GEYJ473	Carbon 47K ohms 1/16W
R835	ERJ6GEYJ471	Carbon 470 ohms 1/16W
R901	YF2116114JT	Carbon 110K ohms 1/10W
R902	YF2116682JT	Carbon 6.8K ohms 1/10W
R903	YF2116152JT	Carbon 1.5K ohms 1/10W
R904	YF2116682JT	Carbon 6.8K ohms 1/10W
R905	YF2116332JT	Carbon 3.3K ohms 1/10W
R906	YF2116822JT	Carbon 8.2K ohms 1/10W
VR1	EVML3GA00B53	Variable Resistor 5KB ohms
VR2	EVML3GA00B52	Variable Resistor 500 ohms
VR201	EVML3GA00B53	Variable Resistor 5KB ohms
VR202	EVML3GA00B52	Variable Resistor 500 ohms
VR301	EVML3GA00B53	Variable Resistor 5KB ohms
VR302	EVML3GA00B52	Variable Resistor 500 ohms
VR401	EVML3GA00B53	Variable Resistor 5KB ohms
VR402	EVML3GA00B52	Variable Resistor 500 ohms
VR501	EVML3GA00B23	Variable Resistor 2K ohms
VR601	EVML3GA00B52	Variable Resistor 500 ohms
VR602	EVML3GA00B14	Variable Resistor 100K ohms
C1	YWRJ310V101M	Electrolytic 100 µF 10V
C2	YF400220CHJT	Ceramic 22 pF
C3	YWRJ310V470M	Electrolytic 47 µF 10V
C4	ECEA1AKN220	Electrolytic 22 µF 10V

REF.NO.	PART NO.	DESCRIPTION	
C5	YWRJ416V101M	Electrolytic	100 µF 16V
C6	YWRJ310V101M	Electrolytic	100 µF 10V
C7	YWR2S50VR22M	Electrolytic	0.22 µF 50V
C8	YW400102CHJT	Ceramic	1000 pF
C9	YF400104FZT	Ceramic	0.1 µF
C10	YF400104FZT	Ceramic	0.1 µF
C11,12	YF400104FZT	Ceramic	0.1 µF
C13	YW400102CHJT	Ceramic	1000pF
C14	YF400101CHJT	Ceramic	100 pF
C15	YF400104FZT	Ceramic	0.1 µF
C16	YF400680CHJT	Ceramic	68 pF CH
C17	YWRJ310V470M	Electrolytic	47 µF 10V
C18	YWRJ416V101M	Electrolytic	100 µF 16V
C19	YF400102XKT	Ceramic	1000 pF
C20	YF400561CHJT	Ceramic	560 pF
C21	YF400102XKT	Ceramic	1000 pF
C22	YF400470CHJT	Ceramic	47 pF
C23	YW400431CHJT	Ceramic	430 pF
C24	YF400102XKT	Ceramic	1000 pF
C25	YF400241CHJT	Ceramic	240 pF
C26	YF400151CHJT	Ceramic	150 pF
C27	YF400102XKT	Ceramic	1000 pF
C28	YF400391CHJT	Ceramic	390 pF
C30	YF400102XKT	Ceramic	1000 pF
C31	YF400510CHJT	Ceramic	51 pF
C32	YF400201CHJT	Ceramic	200 pF
C33	YW400102CHJT	Ceramic	1000 pF
C34	YF400201CHJT	Ceramic	200 pF
C35	YF400121CHJT	Ceramic	120 pF
C37	YWRJ416V101M	Electrolytic	100 µF 16V
C38-40	YWR2S16V100M	Electrolytic	10 µF 16V
C41,42	YF400180CHJT	Ceramic	18 pF
C43	YF400222XKT	Ceramic	2200 pF
C45	YF400330CHJT	Ceramic	33 pF
C46	YF400430CHJT	Ceramic	43 pF (CH)
C47	YF400220CHJT	Ceramic	22 pF
C48	YF400560CHJT	Ceramic	56 pF
C49	YWRJ36V101M	Electrolytic	100 µF 36V
C50	YF400104FZT	Ceramic	0.1 µF
C51	YF400120CHJT	Ceramic	12 pF CH
C52	R3S16V4R7MR	Electrolytic	4.7 µF 16V
C53,54	YWR2S16V100M	Electrolytic	10 µF 16V
C56	YF400271CHJT	Ceramic	270 pF
C57	YF400224FZT	Ceramic	0.22 µF
C58	YF400270CHJT	Ceramic	27 pF
C60	YWRJ310V470M	Electrolytic	47 µF 10V
C61	YWRJ310V101M	Electrolytic	100 µF 10V
C62	YWRJ310V470M	Electrolytic	47 µF 10V
C63	ECEA0JKN220	Electrolytic	22 µF 6.3V
C64	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C65	YWR2S25V4R7M	Electrolytic	4.7 µF 25V
C67	ECEA0JKN220	Electrolytic	22 µF 6.3V
C68	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C69	YWR2S25V4R7M	Electrolytic	4.7 µF 25V
C71	YF400104FZT	Ceramic	0.1 µF
C72	YWRJ416V101M	Electrolytic	100 µF 16V
C73	YF400104FZT	Ceramic	0.1 µF
C74	YWRJ310V101M	Electrolytic	100 µF 10V
C75	ECSF1EE226	Tantalum	22 µF 25V
C76	YF400301CHJT	Ceramic	300 pF
C77	YF400030CHDT	Ceramic	3 pF
C201	YWRJ310V101M	Electrolytic	100 µF 10V
C202	YF400220CHJT	Ceramic	22 pF
C203	YWRJ310V470M	Electrolytic	47 µF 10V
C204	ECEA1AKN220	Electrolytic	22 µF 10V
C205	YF400102XKT	Ceramic	1000 pF
C206	YF400301CHJT	Ceramic	300 pF
C207	YF400470CHJT	Ceramic	47 pF
C208	YW400431CHJT	Ceramic	430 pF
C209	YF400102XKT	Ceramic	1000 pF
C210	YF400241CHJT	Ceramic	240 pF
C211	YF400151CHJT	Ceramic	150 pF
C212	YF400391CHJT	Ceramic	390 pF
C214	YF400102XKT	Ceramic	1000 pF
C215	YF400510CHJT	Ceramic	51 pF
C216,217	YF400201CHJT	Ceramic	200 pF
C218	YF400121CHJT	Ceramic	120 pF
C220	YWRJ310V101M	Electrolytic	100 µF 10V
C221	YWRJ416V101M	Electrolytic	100 µF 16V
C222	YWR2S16V100M	Electrolytic	10 µF 16V
C223,224	YF400180CHJT	Ceramic	18 pF
C225	YWR2S16V100M	Electrolytic	10 µF 16V
C227	YF400560CHJT	Ceramic	56 pF
C229	YWRJ36V101M	Electrolytic	100 µF 36V
C230	YF400104FZT	Ceramic	0.1 µF
C231	YF400120CHJT	Ceramic	12 pF CH
C232	R3S16V4R7MR	Electrolytic	4.7 µF 16V
C233,234	YWR2S16V100M	Electrolytic	10 µF 16V
C235	YF400224FZT	Ceramic	0.22 µF
C236	YF400270CHJT	Ceramic	27 pF (CH)
C238	YWRJ310V101M	Electrolytic	100 µF 10V
C239	YWRJ310V470M	Electrolytic	47 µF 10V
C240	ECEA0JKN220	Electrolytic	22 µF 6.3V
C241	YWR2S6V220M	Electrolytic	22 µF 6V
C242	YWRJ36V101M	Electrolytic	100 µF 36V
C243	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C244	YWRJ36V101M	Electrolytic	100 µF 36V
C245	YWRJ416V101M	Electrolytic	100 µF 16V
C246	YWR2S16V100M	Electrolytic	10 µF 16V
C247	YWRJ310V470M	Electrolytic	47 µF 10V
C248	YF400561CHJT	Ceramic	560 pF
C301	YWRJ310V101M	Electrolytic	100 µF 10V
C302	YF400220CHJT	Ceramic	22 pF
C303	YWRJ310V470M	Electrolytic	47 µF 10V
C304	ECEA1AKN220	Electrolytic	22 µF 10V
C305	YF400102XKT	Ceramic	1000 pF
C306	YF400301CHJT	Ceramic	300 pF
C307	YF400470CHJT	Ceramic	47 pF
C308	YW400431CHJT	Ceramic	430 pF
C309	YF400102XKT	Ceramic	1000 pF

REF.NO.	PART NO.	DESCRIPTION	
C310	YF400241CHJT	Ceramic	240 pF
C311	YF400151CHJT	Ceramic	150 pF
C312	YF400391CHJT	Ceramic	390 pF
C314	YF400102XKT	Ceramic	1000 pF
C315	YF400510CHJT	Ceramic	51 pF
C316,317	YF400201CHJT	Ceramic	200 pF
C318	YF400121CHJT	Ceramic	120 pF
C320	YWRJ310V101M	Electrolytic	100 µF 10V
C321	YWRJ416V101M	Electrolytic	100 µF 16V
C322	YWR2S16V100M	Electrolytic	10 µF 16V
C323,324	YF400180CHJT	Ceramic	18 pF
C325	YWR2S16V100M	Electrolytic	10 µF 16V
C327	YF400560CHJT	Ceramic	56 pF
C329	YWRJ36V101M	Electrolytic	100 µF 36V
C330	YF400104FZT	Ceramic	0.1 µF
C331	YF400120CHJT	Ceramic	12pF CH
C332	R3S16V4R7MR	Electrolytic	4.7 µF 16V
C333,334	YWR2S16V100M	Electrolytic	10 µF 16V
C335	YF400224FZT	Ceramic	0.22 µF
C336	YF400270CHJT	Ceramic	27 pF
C338	YWRJ310V101M	Electrolytic	100 µF 10V
C339	YWRJ310V470M	Electrolytic	47 µF 10V
C340	ECEA0JKN220	Electrolytic	22 µF 6.3V
C341	YWR2S6V220M	Electrolytic	22 µF 6.3V
C342	YWRJ36V101M	Electrolytic	100 µF 36V
C343	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C344	YWRJ36V101M	Electrolytic	100 µF 36V
C345	YWRJ416V101M	Electrolytic	100 µF 16V
C346	YWR2S16V100M	Electrolytic	10 µF 16V
C347	YWRJ310V470M	Electrolytic	47 µF 10V
C348	YF400561CHJT	Ceramic	560pF
C401	YWRJ310V101M	Electrolytic	100 µF 10V
C402	YF400220CHJT	Ceramic	22 pF
C403	YWRJ310V470M	Electrolytic	47 µF 10V
C404	ECEA1AKN220	Electrolytic	22 µF 10V
C405	YF400102XKT	Ceramic	1000 pF
C406	YF400301CHJT	Ceramic	300 pF
C407	YF400470CHJT	Ceramic	47 pF
C408	YW400431CHJT	Ceramic	430 pF
C409	YF400102XKT	Ceramic	1000 pF
C410	YF400241CHJT	Ceramic	240 pF
C411	YF400151CHJT	Ceramic	150 pF
C412	YF400391CHJT	Ceramic	390 pF
C414	YF400102XKT	Ceramic	1000 pF
C415	YF400510CHJT	Ceramic	51 pF
C416,417	YF400201CHJT	Ceramic	200 pF
C418	YF400121CHJT	Ceramic	120 pF
C420	YWRJ310V101M	Electrolytic	100 µF 10V
C421	YWRJ416V101M	Electrolytic	100 µF 16V
C422	YWR2S16V100M	Electrolytic	10 µF 16V
C423,424	YF400180CHJT	Ceramic	18 pF
C425	YWR2S16V100M	Electrolytic	10 µF 16V
C427	YF400560CHJT	Ceramic	56 pF
C429	YWRJ36V101M	Electrolytic	100 µF 36V
C430	YF400104FZT	Ceramic	0.1 µF

REF.NO.	PART NO.	DESCRIPTION	
C431	YF400120CHJT	Ceramic	12pF CH
C432	R3S16V4R7MR	Electrolytic	4.7 µF 16V
C433,434	YWR2S16V100M	Electrolytic	10 µF 16V
C435	YF400224FZT	Ceramic	0.22 µF
C436	YF400270CHJT	Ceramic	27 pF (CH)
C438	YWRJ310V101M	Electrolytic	100 µF 10V
C439	YWRJ310V470M	Electrolytic	47 µF 10V
C440	ECEA0JKN220	Electrolytic	22 µF 6.3V
C441	YF400104FZT	Ceramic	0.1 µF
C442	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C443	YWR2S25V4R7M	Electrolytic	4.7 µF 25V
C445	YWRJ36V101M	Electrolytic	100 µF 36V
C446	YWRJ416V101M	Electrolytic	100 µF 16V
C447	YF400104FZT	Ceramic	0.1 µF
C448	YWR2S16V100M	Electrolytic	10 µF 16V
C449	YWRJ310V470M	Electrolytic	47 µF 10V
C450	YF400561CHJT	Ceramic	560 pF
C501	YWRJ310V470M	Electrolytic	47 µF 10V
C502	YF400220CHJT	Ceramic	22 pF
C503	YF400150CHJT	Ceramic	15 pF
C504	YF400270CHJT	Ceramic	27 pF (CH)
C505	YWRJ36V101M	Electrolytic	100 µF 36V
C506	YWR2S10V220M	Electrolytic	22 µF 10V
C507	YF400104FZT	Ceramic	0.1 µF
C508	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C509	YWR2S25V4R7M	Electrolytic	4.7 µF 25V
C511	YWRJ416V101M	Electrolytic	100 µF 16V
C512	YF400150CHJT	Ceramic	15 pF
C601	YWRJ310V470M	Electrolytic	47 µF 10V
C602	YF400104FZT	Ceramic	0.1 µF
C603	YF400104FZT	Ceramic	0.1 µF
C604	YF400151CHJT	Ceramic	150 pF
C605	YF400104FZT	Ceramic	0.1 µF
C606	YF400390CHJT	Ceramic	39 pF
C607	YWR2S16V100M	Electrolytic	10 µF 16V
C608	YF400104FZT	Ceramic	0.1 µF
C609	YF400560CHJT	Ceramic	56 pF
C610	YWRJ416V101M	Electrolytic	100 µF 16V
C611	YWRJ310V101M	Electrolytic	100 µF 10V
C612	YWR2S10V220M	Electrolytic	22 µF 10V
C613	ECEB0JGE332	Electrolytic	3300 µF 6.3V
C614	YWR2S25V4R7M	Electrolytic	4.7 µF 25V
C616	YWRJ416V101M	Electrolytic	100 µF 16V
C617	YF400270CHJT	Ceramic	27 pF
C618	ECEB1CGE222	Electrolytic	2200 µF 16V
C619	YWRJ416V101M	Electrolytic	100 µF 16V
C620-622	YF400104FZT	Ceramic	0.1 µF
C623	YWR2S16V100M	Electrolytic	10 µF 16V
C624	YF400150CHJT	Ceramic	15 pF
C701	YWRJ416V101M	Electrolytic	100 µF 16V
C702-706	YF400104FZT	Ceramic	0.1 µF
C801,802	YWRJ416V101M	Electrolytic	100 µF 16V
C803,804	ECEA1CKN100	Electrolytic	10 µF 16V
C805	YF400102XKT	Ceramic	1000 pF
C806	ECEA1CKN100	Electrolytic	10 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C807	YWRJ416V101M	Electrolytic	100 µF 16V
C808-811	ECEA1CKN100	Electrolytic	10 µF 16V
C812	YF400472XKT	Ceramic	4700 pF
C813	ECEA1CGE471	Electrolytic	470 µF 16V
C814	YF400103XKT	Ceramic	0.01 µF
C815	YWRJ325V470M	Electrolytic	47 µF 25V
C817	ECEA1CGE471	Electrolytic	470 µF 16V
C818	YWRJ310V101M	Electrolytic	100 µF 10V
C819	ECEA1CKN100	Electrolytic	10 µF 16V
C820	ECEA1CKA220	Electrolytic	22 µF 16V
C821	ECEA1CKN100	Electrolytic	10 µF 16V
C901,902	YF400224FZT	Ceramic	0.22 µF
C903	YF400100CHDT	Ceramic	10 pF
L1	YFEL05SI4R7K	Coil	4.7 µH
L2	YWNL32470J	Coil	47 µH
L3	YWNL322R7J	Coil	2.7 µH
L4	YWNL32470J	Coil	47 µH
L201	YFEL05SI4R7K	Coil	4.7 µH
L202	YWNL32470J	Coil	47 µH
L203	YWNL322R7J	Coil	2.7 µH
L301	YFEL05SI4R7K	Coil	4.7 µH
L302	YWNL32470J	Coil	47 µH
L303	YWNL322R7J	Coil	2.7 µH
L401	YFEL05SI4R7K	Coil	4.7 µH
L402	YWNL32470J	Coil	47 µH
L403	YWNL322R7J	Coil	2.7 µH
L501,601	YFEL05SI4R7K	Coil	4.7 µH
L602	YWNL32100J	Coil	
SW1	YWSSS21200	Slide Switch	
SW2	YWSSS222AN	Slide Switch	
CN1	FCN215Q050GA	50-pin Connector	
E1-5	YW32BM7R5	Terminal	
E201,202	YW32BM7R5	Terminal	
E301,302	YW32BM7R5	Terminal	
E401,402	YW32BM7R5	Terminal	
E501	YW32BM7R5	Terminal	
M40	YWCBE-14	Holder	

REF.NO.	PART NO.	DESCRIPTION
	POWER BOARD	
PCB2 (RTL)	YWVKZRCU7P2A	Printed Circuit Board Assy
IC1,2	YWTL1451CNS	IC
IC4	AN78N05	IC
IC5	NJM2902M	IC
IC6	NJM2903M	IC
IC7	MN74HC221S	IC
IC8	NJM78L05A	IC
IC201	YWNJM7824A	IC
IC202	NJM2903M	IC
IC203	NJM555M	IC
IC204	YWTC4S71F	IC
IC205	MN4042BS	IC
IC206	NJM592M8	IC
IC208	YWTC4S69F	IC
IC209	MN4538BS	IC
IC210	NJM2903M	IC
IC211	YWTC4S71F	IC
IC212	YWTC4S81FR	IC
IC213	TL062CPS	IC
IC214	NJM2903M	IC
IC401	MN4050BS	IC
IC402	MN4053BS	IC
IC403	NJM4556M	IC
IC404	NJM2903M	IC
IC501	MN74HC74S	IC
Q1-7	2SD601A-QR	Transistor
Q9	2SD601A-QR	Transistor
Q10	2SB709A-S	Transistor
Q11,12	2SD601A-QR	Transistor
Q13,14	2SJ132	FET
Q15	2SD601A-QR	Transistor
Q16	2SB709A-S	Transistor
Q17,18	2SJ132	FET
Q19,20	2SB709A-S	Transistor
Q21	2SB819	Transistor
Q22,23	2SD601A-QR	Transistor
Q24	2SB709A-S	Transistor
Q26	2SJ132	FET
Q27	2SD601A-QR	Transistor
Q28	2SB819	Transistor
Q29	2SD601A-QR	Transistor
Q30	2SB709A-S	Transistor
Q31	2SD973-QRS	Transistor
Q32	2SB709-RS	Transistor
Q201	2SB792A-RS	Transistor
Q202	2SD814-QRS	Transistor
Q204	2SJ122	Transistor
Q205,206	2SD814-QRS	Transistor
Q207	2SB709A-S	Transistor
Q208,209	2SD601A-QR	Transistor

REF.NO.	PART NO.	DESCRIPTION	
Q211,212	2SD601A-QR	Transistor	
Q213	2SB709A-S	Transistor	
Q214,215	2SD601A-QR	Transistor	
Q216	NTM3906-T2B	Transistor	
Q217	YWNTM3904	Transistor	
Q218	2SD814-QRS	Transistor	
Q219	2SD601A-QR	Transistor	
Q220	2SB793-RS	Transistor	
Q221	2SD601A-QR	Transistor	
Q222	2SA1111-QR	Transistor	
Q223	2SD1328-RS	Transistor	
Q224,225	2SD814-QRS	Transistor	
Q226,401	2SD601-RS	Transistor	
Q402	2SB709-RS	Transistor	
Q501,502	2SD601-RS	Transistor	
Q503,504	2SD601A-QR	Transistor	
Q505	2SD601-RS	Transistor	
D1	MA151K	Diode	
D2	LN21RPH	LED	Red
D3	MA151K	Diode	
D4-7	YWERA81004	Diode	
D10	YWERA81004	Diode	
D11	MA1130-M	Diode	
D12	MA1062-L	Diode	
D201	MA1100-H	Diode	
D202-204	MA151K	Diode	
D206	MA151K	Diode	
D207,208	V03G	Diode	
D209,210	MA151K	Diode	
D212-214	1SS97-2	Diode	
D215	MA151K	Diode	
D216-218	YWRD10FB	Diode	
D220,222	MA151K	Diode	
D223,224	MA151K	Diode	
D225	MA182	Diode	
D226	YFRD22EB2	Diode	
D227	MA1051-M	Diode	
D228	MA1056H	Diode	
D401,501	MA151K	Diode	
R1	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R2	YF2116912GT	Carbon	9.1K ohms 1/10W
R3	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R4	YF2116123JT	Carbon	12K ohms 1/10W
R5-9	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R11	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R13	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R15	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R16	YF2116104JT	Carbon	100K ohms 1/10W
R17	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R19	R1220P432D	Metal	4.3K ohms
R20	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R21	YF2116101JT	Carbon	100 ohms 1/10W
R22	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R23	YWR1220P753D	Metal	75K ohms
R24	YF2116272JT	Carbon	2.7K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R25	YF2116392JT	Carbon	3.9K ohms 1/10W
R26	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R27	YF2116303GT	Carbon	30K ohms 1/10W
R28	YWR1220P753D	Metal	75K ohms
R29	YWR1220P562D	Metal	5.6K ohms
R31	YFR1220P104D	Metal	100K ohms
R32	YF2116823JT	Carbon	82K ohms 1/10W
R33	YF2116101JT	Carbon	100 ohms 1/10W
R35	YF2116104JT	Carbon	100K ohms 1/10W
R36	YWR1220P154D	Metal	150K ohms
R37	YF2116100JT	Carbon	10 ohms 1/10W
R38	YF2116682JT	Carbon	6.8K ohms 1/10W
R39	YF2116512JT	Carbon	5.1K ohms 1/10W
R40	YF2116392JT	Carbon	3.9K ohms 1/10W
R41	YF2116106JT	Carbon	10M ohms 1/10W
R42	YF2116100JT	Carbon	10 ohms 1/10W
R43	YWR1220P243D	Metal	24K ohms
R44,45	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R46	YF2116272JT	Carbon	2.7K ohms 1/10W
R47	YF2116100JT	Carbon	10 ohms 1/10W
R48	ERJ6GEY0R00	Carbon	1 ohms 1/10W
R49,50	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R51	YF2116682JT	Carbon	6.8K ohms 1/10W
R52	YWR1220P302D	Metal	3K ohms
R53	ERJ6GEY0R00	Carbon	1 ohms 1/10W
R54	YF2116100JT	Carbon	10 ohms 1/10W
R55	YWR1220P333D	Metal	33K ohms
R56	YWR1220P471D	Metal	470 ohms
R57	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R58,59	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R60	ERJ6GEY0R00	Carbon	1 ohms 1/10W
R61	YFR1220P392D	Metal	3.9K ohms
R62	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R65	YWR1220P153D	Metal	15K ohms
R66	YWR1220P202D	Metal	2K ohms
R67	YFR1220P203D	Metal	20K ohms
R69	YWR1220P272D	Metal	2.7K ohms
R70	YF2116100JT	Carbon	10 ohms 1/10W
R73	YWR1220P182D	Metal	1.8K ohms
R74	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R75	YF2116392JT	Carbon	3.9K ohms 1/10W
R76	YWR1220P562D	Metal	5.6K ohms
R77	YWR1220P124D	Metal	120K ohms
R78	YF2116224JT	Carbon	220K ohms 1/10W
R79-82	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R83	YWR1220P183D	Metal	18K ohms
R84	YWR1220P103D	Metal	10K ohms
R85	YWR1220P101D	Metal	100 ohms
R86,87	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R88	YF2116101JT	Carbon	100 ohms 1/10W
R89	YWR1220P163D	Metal	16K ohms
R90	YWR1220P391D	Metal	390 ohms
R91	YWR1220P912D	Metal	9.1K ohms
R92	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R94	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R95	YF2116113JT	Carbon	11K ohms 1/10W
R96	YF2116473GT	Carbon	47K ohms 1/10W
R98	ERSB30G272	Metal	2.7K ohms
R201	ERD50FJ473	Carbon	47K ohms 1/2W
R202	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R203	YF2116104JT	Carbon	100K ohms 1/10W
R204	ERF5AK1R0	Wire Wound	1 ohms 5W
R205	YF2116152JT	Carbon	1.5K ohms 1/10W
R206	YF2116332JT	Carbon	3.3K ohms 1/10W
R208	ERD50FJ223	Carbon	22K ohms 1/2W
R210	ERD50FJ473	Carbon	47K ohms 1/2W
R211	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R212	YF2116104JT	Carbon	100K ohms 1/10W
R213	ERD50FJ271	Carbon	270 ohms 1/2W
R214	ERD50FJ301	Carbon	
R216	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R217	ERF3TJ681	Wire Wound	680 ohms 3W
R219	YF2116473GT	Carbon	47K ohms 1/10W
R220	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R221	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R222	YF2116473GT	Carbon	47K ohms 1/10W
R223	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R224	YF2116473GT	Carbon	47K ohms 1/10W
R225	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R226,227	YF2116153JT	Carbon	15K ohms 1/10W
R228	YF2116104JT	Carbon	100K ohms 1/10W
R229	ERJ6GEYJ473	Carbon	47K ohms 1/10W
R232	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R233	YF2116104JT	Carbon	100K ohms 1/10W
R234	YF2116303GT	Carbon	30K ohms 1/10W
R235	YF2116104JT	Carbon	100K ohms 1/10W
R236	ERG1CJ102	Metal	1K ohms 1W
R237	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R238	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R239	YF2116473GT	Carbon	47K ohms 1/10W
R240	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R241,242	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R243	YF2116684JT	Carbon	680K ohms 1/10W
R244	YF2116334JT	Carbon	330K ohms 1/10W
R245	YF2116333GT	Carbon	33K ohms 1/10W
R246,247	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R248,249	YF2116153JT	Carbon	15K ohms 1/10W
R250	YF2116104JT	Carbon	100K ohms 1/10W
R251	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R252	YF2116473GT	Carbon	47K ohms 1/10W
R253	YF2116104JT	Carbon	100K ohms 1/10W
R254	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R255,256	2116150JT	Carbon	15 ohms 1/10W
R257	YF2116752JT	Carbon	7.5K ohms 1/10W
R258	YF2116823JT	Carbon	82K ohms 1/10W
R259	YF2116683GT	Carbon	68K ohms 1/10W
R260	YF2116682JT	Carbon	6.8K ohms 1/10W
R261	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R262,263	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R264,265	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R266	ERG3CJ102	Metal	1K ohms 3W
R268,269	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R270	YF2116222GT	Carbon	2.2K ohms 1/10W
R271,272	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R273	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R274	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R275	YF2116224JT	Carbon	220K ohms 1/10W
R276	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R277	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R278	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R279	YF2116151JT	Carbon	150 ohms 1/10W
R280	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R281	YF2116683GT	Carbon	68K ohms 1/10W
R282	YF2116133GT	Carbon	13K ohms 1/10W
R283	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R284	YW2116105JT	Carbon	1M ohms 1/10W
R285	YF2116334JT	Carbon	330K ohms 1/10W
R286	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R287	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R288	YF2116683GT	Carbon	68K ohms 1/10W
R289	YF2116563JT	Carbon	56K ohms 1/10W
R290	ERDS2TJ394	Carbon	390K ohms 1/4W
R291	YF2116101JT	Carbon	100 ohms 1/10W
R292	YF2116271JT	Carbon	270 ohms 1/10W
R293	R1220P913D	Metal	91K ohms
R294	YF2116912GT	Carbon	9.1K ohms 1/10W
R295	ERDS2TJ473	Carbon	47K ohms 1/4W
R296	YF2116302GT	Carbon	3K ohms 1/10W
R297	ERDS2TJ432	Carbon	4.3K ohms 1/4W
R298	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R299	YF2116225JT	Carbon	2.2M ohms1/10W
R300	YF2116181JT	Carbon	180 ohms 1/10W
R301	YF2116333GT	Carbon	33K ohms 1/10W
R302-304	ERF3TJ681	Wire Wound	680 ohms 3W
R305	YWR1220P393D	Metal	39K ohms
R306	YFR1220P113D	Metal	11K ohms
R307	ERJ6GEYJ473	Carbon	47K ohms 1/10W
R308	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R309,401	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R402	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R403,404	YFR1220P222D	Metal	2.2K 0HMS
R405	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R406	YF2116510JT	Carbon	51 ohms 1/10W
R407	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R408	YF2116123JT	Carbon	12K ohms 1/10W
R409	YF2116273GT	Carbon	27K ohms 1/10W
R410	YF2116101JT	Carbon	100 ohms 1/10W
R411	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R412-414	ERJ6GEY0R00	Carbon	0 ohms 1/10W
R415	YF2116101JT	Carbon	100 ohms 1/10W
R501	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R502	YF2116473GT	Carbon	47K ohms 1/10W
R503	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R505	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R506	YF2116473GT	Carbon	47K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION
R507	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R508-511	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R512,513	YF2116473GT	Carbon 47K ohms 1/10W
R514	ERJ6GEYJ103	Carbon 10K ohms 1/10W
R516,517	ERJ6GEY0R00	Carbon 0 ohms 1/10W
R518	ERJ6GEYJ103	Carbon 10K ohms 1/10W
VR1	YWH0621A470	Variable Resistor 47 ohms
VR2	YWH0621A22K	Variable Resistor 22K ohms
VR202	YFH0621A2R2K	Variable Resistor 2.2K ohms
C1	YF400103XKT	Ceramic 0.01 μF
C2	YF400683XKT	Ceramic 0.068 μF XK
C3	ECSF1HE334	Tantalum 0.33 μF 50V
C4	YF400103XKT	Ceramic 0.01 μF
C5	YF400104FZT	Ceramic 0.1 μF
C6,7	YF400683XKT	Ceramic 0.068 μF XK
C8	YF400103XKT	Ceramic 0.01 μF
C9	YF400104FZT	Ceramic 0.1 μF
C10	YF400681CHJT	Ceramic 680μF 50V
C11	YF400200CHJT	Ceramic 20 pF
C12	YF400683XKT	Ceramic 0.068 μF XK
C14	YF400270CHJT	Ceramic 27 pF
C16,17	YF400103XKT	Ceramic 0.01 μF
C19	YWR2S35V100M	Electrolytic 10 μF 35V
C20,21	ECEB1VGE102	Electrolytic 1000 μF 35V
C22	ECA1VFQ221	Electrolytic 220 μF 35V
C23	YWR2S50VR47M	Electrolytic 0.47 μF 50V
C24,25	ECA1CFZ221	Electrolytic 220 μF 16V
C26	YWR2S50VR47M	Electrolytic 0.47 μF 50V
C27	ECA1CFZ221	Electrolytic 220 μF 16V
C28	ECA1CFQ271	Electrolytic 270 μF 16V
C29	ECA1CFZ221	Electrolytic 220 μF 16V
C30	YWR2S50VR47M	Electrolytic 0.47 μF 50V
C31	ECA0JFQ331	Electrolytic 330 μF 6.3V
C32	ECA0JFZ331	Electrolytic 330 μF 6.3V
C33	ECA1AFQ221	Electrolytic 220 μF 10V
C34	ECA0JFZ331	Electrolytic 330 μF 6.3V
C35	YF400104FZT	Ceramic 0.1 μF
C36	ECSF1HE334	Tantalum 0.33 μF 50V
C39	YF400103XKT	Ceramic 0.01 μF
C40	ECA0JFQ331	Electrolytic 330 μF 6.3V
C41,42	YF400102XKT	Ceramic 1000 pF
C43	YF400104FZT	Ceramic 0.1 μF
C44	ECA0JFQ331	Electrolytic 330 μF 6.3V
C45,46	YF400104FZT	Ceramic 0.1 μF
C50	YWR2S50VR22M	Electrolytic 0.22 μF 50V
C51	YWRJ335V330M	Electrolytic 33 μF 35V
C202	YWRJ350V470	Electrolytic 47 μF 50V
C204,205	YWRJ3120V471	Electrolytic 470 μF 120V
C206	YWRJ3160V220	Electrolytic 22 μF 16V
C207	YWRJ350V470	Electrolytic 47 μF 50V
C208	YF400104FZT	Ceramic 0.1 μF
C210	YWRJ350V470	Electrolytic 47 μF 50V
C211	YWR2S50V1R0M	Electrolytic 1 μF 50V
C212	ECQB1H102JF	Plastic 1000 pF 50V
C213	ECQM2104KZ	Plastic 0.1 μF
C214	YWR2S50V1R0M	Electrolytic 1 μF 50V
C215	YF400103XKT	Ceramic 0.01 μF
C216	ECSF1EE225	Tantalum 2.2 μF 25V
C217	ECSF1EE685	Tantalum 6.8 μF 25V
C218	RC2S10V101M	Electrolytic 100 μF 10V
C219	YF400224FZT	Ceramic 0.22 μF
C220	ECSF1AE336	Tantalum 33 μF 10V
C221,222	YF400102XKT	Ceramic 1000 pF
C223	RC2S10V101M	Electrolytic 100 μF 10V
C224,225	YF400104FZT	Ceramic 0.1 μF
C226	YW400090CHDT	Ceramic 9 pF
C227	YW400080CHD	Ceramic 8 pF
C228-230	YF400101CHJT	Ceramic 100 pF
C233	YF400104FZT	Ceramic 0.1 μF
C234	YWR2S50V1R0M	Electrolytic 1 μF 50V
C235	ECSF1VE105	Tantalum 1 μF 35V
C237	YF400104FZT	Ceramic 0.1 μF
C238	YF400822XKT	Ceramic 8200 pF
C239,240	YF400104FZT	Ceramic 0.1 μF
C241	YWRJ350V010	Electrolytic 1 μF
C401	R2S6R3V101M	Electrolytic 100 μF 6.3V
C402-405	YF400104FZT	Ceramic 0.1 μF
C406	ECEA1CKN220	Electrolytic 22 μF 16V
C407	ECEA1AKN470	Electrolytic 47 μF 10V
C501	YF400681CHJT	Ceramic 680 μF 50V
C502	YF400104FZT	Ceramic 0.1 μF
C503	YWR2S16V100M	Electrolytic 10 μF 16V
C504	R2S6R3V101M	Electrolytic 100 μF 6.3V
C505,506	YF400224FZT	Ceramic 0.22 μF
L1	YWS100458470	Coil 47 μH
L2	YWS100522470	Coil 47 μH
L3	YWS100458151	Coil 15 μH
L4	YWS100522470	Coil 47 μH
L5	YWS100458221	Coil 220 μH
L6,7	YWS100522470	Coil 47 μH
L8	YWS100522391	Coil 390 μH
L201,202	ELC18E001	Coil
L203	EIL7EN004Q	Coil
L204	EIL7EN005Q	Coil
L205	EIL7EN004Q	Coil
L401,501	EL05SI330K	Coil 33 μH
CN1	FCN215Q050GA	50-pin Connector
E1-9	YW32BM12R5	Terminal
E10	WMT4X1R2X5	Insulator
E201	YW32BM12R5	Terminal
E203-206	YW32BM12R5	Terminal
E208-212	YW32BM12R5	Terminal
E501,502	YW32BM12R5	Terminal
M19	YWV2HA0993A3	Shield Cover A
M30	YWV7DA0193A4	Heat Sink
M40	YWCBE-14	Holder

REF.NO.	PART NO.	DESCRIPTION	
DEMODULATOR BOARD			
PCB3 (RTL)	YWVKZRCU7E3A	Printed Circuit Board Assy	
IC1	YWTC4S66FR	IC	
IC2	YWTC4S69F	IC	
IC3	YWUPD4011BG	IC	
IC4	NJM592M8	IC	
IC5	NJM2903M	IC	
IC6	YWUPD4050BG	IC	
IC7	YWTC4S66FR	IC	
IC8	UPD74HC221AG	IC	
IC9	YWUPD4538BG	IC	
IC10	UPD74HC221AG	IC	
IC11	YWUPD74HC08G	IC	
IC12	TL092CPS	IC	
IC13	NJM4556M	IC	
IC14	YWUPD4053BG	IC	
Q1	2SC2404-CD	Transistor	
Q2-4	2SD601-RS	Transistor	
Q5	2SC2404-CD	Transistor	
Q6	2SD601-RS	Transistor	
Q7	2SK198-P	Transistor	
Q8	2SA1022-C	Transistor	
Q9	2SD601-RS	Transistor	
Q10,11	2SC2404-CD	Transistor	
Q12	2SK198-P	Transistor	
Q13-15	2SC2404-CD	Transistor	
Q16,17	2SA1022-C	Transistor	
Q18,19	2SD601-RS	Transistor	
Q20	2SA1022-C	Transistor	
Q21,22	2SD601-RS	Transistor	
Q23	2SC3757-Q	Transistor	
Q24,25	2SD601-RS	Transistor	
Q26	2SK198-P	Transistor	
Q27,28	2SC3757-Q	Transistor	
Q29	2SC2405STU	Transistor	
Q30-34	2SD601-RS	Transistor	
D1	MA151K	Diode	
D2	MA165	Diode	
D3,4	MA151K	Diode	
D5,6	MA182	Diode	
R1	YF2116822JT	Carbon	8.2K ohms 1/10W
R2	YF2116563JT	Carbon	56K ohms 1/10W
R3	YF2116332JT	Carbon	3.3K ohms 1/10W
R4	YF2116510JT	Carbon	51 ohms 1/10W
R5	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R6	YF2116510JT	Carbon	51 ohms 1/10W
R7	YF2116332JT	Carbon	3.3K ohms 1/10W
R8,9	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R10	YF2116331JT	Carbon	330 ohms 1/10W
R11	YW2116182JT	Carbon	1.8K ohms 1/10W
R13	YF2116331JT	Carbon	330 ohms 1/10W
R16	YF2116222GT	Carbon	2.2K ohms 1/10W
R17	YF2116221JT	Carbon	220 ohms 1/10W
R18	YF2116152JT	Carbon	1.5K ohms 1/10W
R19	YF2116202JT	Carbon	2K ohms 1/10W
R20	YF2116222GT	Carbon	2.2K ohms 1/10W
R21	YF2116112JT	Carbon	1.1K ohms 1/10W
R22	YF2116101JT	Carbon	100 ohms 1/10W
R23	YF2116821GT	Carbon	820 ohms 1/10W
R24	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R26	YF2116822JT	Carbon	8.2K ohms 1/10W
R27	YF2116333GT	Carbon	33K ohms 1/10W
R28	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R29	YF2116274JT	Carbon	270K ohms 1/10W
R30	YF2116332JT	Carbon	3.3K ohms 1/10W
R31	YF2116471JT	Carbon	470 ohms 1/10W
R32	YF2116202JT	Carbon	2K ohms 1/10W
R33	YF2116302GT	Carbon	3K ohms 1/10W
R34,35	YF2116683GT	Carbon	68K ohms 1/10W
R36,37	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R38	YF2116471JT	Carbon	470 ohms 1/10W
R39	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R40	YF2116333GT	Carbon	33K ohms 1/10W
R41	YF2116473GT	Carbon	47K ohms 1/10W
R42	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R43	YF2116123JT	Carbon	12K ohms 1/10W
R44	YF2116560JT	Carbon	56 ohms 1/10W
R45	YF2116153JT	Carbon	15K ohms 1/10W
R46,47	YF2116470JT	Carbon	47 ohms 1/10W
R48	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R49	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R50,51	YF2116183GT	Carbon	18K ohms 1/10W
R52	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R53	YF2116333GT	Carbon	33K ohms 1/10W
R54	YF2116331JT	Carbon	330 ohms 1/10W
R55	YF2116683GT	Carbon	68K ohms 1/10W
R56	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R57	YF2116683GT	Carbon	68K ohms 1/10W
R58	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R59	YF2116511JT	Carbon	510 ohms 1/10W
R60-62	YF2116101JT	Carbon	100 ohms 1/10W
R63	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R64	YF2116391JT	Carbon	390 ohms 1/10W
R65	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R66	YF2116332JT	Carbon	3.3K ohms 1/10W
R67	YF2116682JT	Carbon	6.8K ohms 1/10W
R68	YF2116752JT	Carbon	7.5K ohms 1/10W
R69	YF2116473GT	Carbon	47K ohms 1/10W
R70,71	YF2116332JT	Carbon	3.3K ohms 1/10W
R72,73	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R74	YF2116822JT	Carbon	8.2K ohms 1/10W
R75	YF2116202JT	Carbon	2K ohms 1/10W
R76	YF2116101JT	Carbon	100 ohms 1/10W
R77	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R78	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R79	YF2116272JT	Carbon	2.7K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R80	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R81	YF2116332JT	Carbon	3.3K ohms 1/10W
R82	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R83,84	YF2116272JT	Carbon	2.7K ohms 1/10W
R85	YF2116394JT	Carbon	390K ohms 1/10W
R86	YF2116272JT	Carbon	2.7K ohms 1/10W
R87	YF2116112JT	Carbon	1.1K ohms 1/10W
R88,89	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R90	YF2116332JT	Carbon	3.3K ohms 1/10W
R91	YF2116682JT	Carbon	6.8K ohms 1/10W
R92	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R93,94	YF2116222GT	Carbon	2.2K ohms 1/10W
R95	YWR1220P224D	Metal	220K ohms
R96	YF2116222GT	Carbon	2.2K ohms 1/10W
R97	YF2116514GT	Carbon	510K ohms 1/10W
R98	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R99	YF2116272JT	Carbon	2.7K ohms 1/10W
R100	YF2116563JT	Carbon	56K ohms 1/10W
R102	YF2116162JT	Carbon	1.6K ohms 1/10W
R103,104	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R105	YF2116332JT	Carbon	3.3K ohms 1/10W
R106	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R107	YF2116153JT	Carbon	15K ohms 1/10W
R108	YF2116183GT	Carbon	18K ohms 1/10W
R109	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R110	YF2116202JT	Carbon	2K ohms 1/10W
R111	YF2116220JT	Carbon	22 ohms 1/10W
R112	YF2116362JT	Carbon	3.6K ohms 1/10W
R113	YF2116511JT	Carbon	510 ohms 1/10W
R114	YF2116152JT	Carbon	1.5K ohms 1/10W
R115	YF21164R7JT	Carbon	4.7 ohms 1/10W
R116	YF2116101JT	Carbon	100 ohms 1/10W
R117	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R118	YF2116221JT	Carbon	220 ohms 1/10W
R119	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R120	YF2116473GT	Carbon	47K ohms 1/10W
R121	YF2116471JT	Carbon	470 ohms 1/10W
R122	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R123	YF2116682JT	Carbon	6.8K ohms 1/10W
R124	YF2116152JT	Carbon	1.5K ohms 1/10W
R125	YF2116682JT	Carbon	6.8K ohms 1/10W
R126	YF2116332JT	Carbon	3.3K ohms 1/10W
R127	YF2116822JT	Carbon	8.2K ohms 1/10W
R128	YF2116114JT	Carbon	110K ohms 1/10W
VR1	EVML3GA00B13	Variable Resistor	1K ohms
VR2	EVML3GA00B54	Variable Resistor	50K ohms
VR3	EVML3GA00B55	Variable Resistor	500K ohms
VR4-6	EVML3GA00B25	Variable Resistor	200K ohms
VR7	EVML3GA00B53	Variable Resistor	5KB
C1	ECEA1AKA101	Electrolytic	100 µF 10V
C2	ECSF1CE476	Electrolytic	47 µF 16V
C3	YW400750CHJT	Ceramic	75pF (CH)
C4	ECEA1CKA101	Electrolytic	100 µF 16V
C5	ECSF1CE476	Electrolytic	47 µF 16V
C7	ECEA0JU471	Electrolytic	470 µF 6.3V

REF.NO.	PART NO.	DESCRIPTION	
C8	YF400224FZT	Ceramic	0.22 µF
C9	ECEA1AKS470	Electrolytic	47 µF 10V
C10	ECSF1CE156	Tantalum	15 µF 16V
C11	YF400101CHJT	Ceramic	100 pF
C12	ECEA1AKS470	Electrolytic	47 µF 10V
C13,14	YF400150CHJT	Ceramic	15 pF
C15	ECEA1CKA101	Electrolytic	100 µF 16V
C16	YF400100CHDT	Ceramic	10 pF
C17	YW400080CHD	Ceramic	8 pF
C18	YW400090CHDT	Ceramic	9 pF
C19-21	YF400121CHJT	Ceramic	120 pF
C24,25	YF400104FZT	Ceramic	0.1 µF
C26	ECEA1AKS470	Electrolytic	47 µF 10V
C27	ECSF1CE476	Tantalum	47 µF 16V
C28	ECSF1AE476	Tantalum	47 µF 10V
C29	YF400104FZT	Ceramic	0.1 µF
C30,31	ECEA1AKS470	Electrolytic	47 µF 10V
C32	YF400101CHJT	Ceramic	100 pF
C33	YF400050CHDT	Ceramic	5 pF
C34	ECSF1CE476	Tantalum	47 µF 16V
C35	ECEA1HKS010	Electrolytic	1 µF 50V
C36	YF400050CHDT	Ceramic	5 pF
C37	ECSF1CE476	Tantalum	47 µF 16V
C38	ECEA1CKA101	Electrolytic	100 µF 16V
C40	ECSF0JE107	Tantalum	100 µF 6.3V
C41	YF400103XKT	Ceramic	0.01 µF
C42	ECEA1AKS470	Electrolytic	47 µF 10V
C43	YF400224FZT	Ceramic	0.22 µF
C44	YF400101CHJT	Ceramic	100 pF
C45	ECEA1CKA101	Electrolytic	100 µF 16V
C46	ECQB1H102JF	Plastic	1000 pF 50V
C47	ECSF1AE476	Electrolytic	47 µF 10V
C48,49	ECQB1H102JF	Plastic	1000 pF 50V
C50	ECSF1AE476	Electrolytic	47 µF 10V
C51	ECQB1H102JF	Plastic	1000 pF 50V
C52	ECSF1AE476	Electrolytic	47 µF 10V
C53	ECEA1CKA101	Electrolytic	100 µF 16V
C54	ECEA1CKS470	Electrolytic	47 µF 16V
C55	ECEA1VKN2R2	Electrolytic	2.2 µF 35V
C56	YF400104FZT	Ceramic	0.1 µF
C57	ECSF1CE106	Electrolytic	10 µF 16V
C58	ECSF1CE105	Electrolytic	1 µF 16V
C59	ECEA1AKS470	Electrolytic	47 µF 10V
C60	ECEA1AKA101	Electrolytic	100 µF 10V
C61	YF400220CHJT	Ceramic	22 pF
C62	ECEA1EGE101	Electrolytic	100 µF 25V (SU)
C63	YF400224FZT	Ceramic	0.22 µF
C64	ECEA1AU471	Electrolytic	470 µF 10V
C65	ECEA0JKA331	Electrolytic	330 µF 6.3V
C66	ECEA1CKA100	Electrolytic	10 µF 16V
C67	YF400560CHJT	Ceramic	56 pF
C68	YF400101CHJT	Ceramic	100 pF
C69	YF400390CHJT	Ceramic	39 pF
C70	YF400224FZT	Ceramic	0.22 µF
C71	YF400104FZT	Ceramic	0.1 µF

REF.NO.	PART NO.	DESCRIPTION
C72	YF400220CHJT	Ceramic 22 pF
C73	YF400050CHDT	Ceramic 5 pF
C74	YF400100CHDT	Ceramic 10 pF
C75,76	YF400224FZT	Ceramic 0.22 µF
C77	YF400150CHJT	Ceramic 15 pF
C78	YF400100CHDT	Ceramic 10 pF
C79	YF400090CHDT	Ceramic 9 pF
C80	YF400080CHD	Ceramic 8 pF
CT1	YWCDX20APS	Trimmer Capacitor 20 pF
L1	EIL7EM001Q	Coil
L2	EIL7EM002Q	Coil
L3	YWNL32220J	Coil 22 µH
L4,5	YWNL32100J	Coil 10 µH
L6	EIL7EN010Q	Coil
L7	EIL7EN011Q	Coil
L8	EIL7EN012Q	Coil
CF1	YWT5V8MLpF	Filter
CF2	YWYS30546	Filter
CF3	ELKTH101GA	Filter
CN1	FCN215Q050GA	50-pin Connector
E1-9	YW32BM12R5	Terminal
M19	YWV2HA0993A3	Shield Cover A
M20	YWV2HA0996A2	Shield Cover B
M40	YWCBE-14	Holder

MODULATOR BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB4 (RTL)	YWVKZRC7AE4A	Printed Circuit Board Assy	
IC1	NJM4560M	IC	
IC2	YWTA7303P	IC	
IC3	NJM4556MB	IC	
IC4	NJM2903M	IC	
IC5	NJM1496M	IC	
IC6,7	YWTC4S66FR	IC	
IC8	YWTC4S69F	IC	
IC9	YWLM1881M	IC	
IC10	YWTC4S69F	IC	
IC11	YWTC4S66FR	IC	
IC12	TLC272CPS	IC	
IC13	YWSN16913P	IC	
IC14	YWTC4S66FR	IC	
IC15	YWTC4S71F	IC	
IC16	YWTC7S08F	IC	
IC17	UPD74HC393G	IC	
IC18	YWTC7S08F	IC	
IC19	NJM1496M	IC	
IC20	YWTC4S66FR	IC	
IC21	YWTC4S69F	IC	
IC22	UPD74HC164G	IC	
IC23	YWTC7S04F	IC	
IC24	YWUPD74HC10G	IC	
IC25	YWUPD4538BG	IC	
Q1-3	2SC2404-CD	Transistor	
Q4	2SC3757-Q	Transistor	
Q5	2SB709-RS	Transistor	
Q6	2SK198-P	Transistor	
Q7-9	2SD601-RS	Transistor	
Q10	2SC2404-CD	Transistor	
Q11	2SC3757-Q	Transistor	
Q12,13	2SC2404-CD	Transistor	
Q14	2SC3757-Q	Transistor	
Q15	2SC2404-CD	Transistor	
Q16-18	2SC3757-Q	Transistor	
Q19	2SD601-RS	Transistor	
Q20	2SB793-RS	Transistor	
Q21	2SD601-RS	Transistor	
Q22	2SA1022-CD	Transistor	
Q23	2SC2404-CD	Transistor	
Q24-26	2SD601-RS	Transistor	
Q27	2SB793-RS	Transistor	
Q28	2SD1328-RS	Transistor	
Q29	2SD601-RS	Transistor	
D1,2	YWRD2R0ESB1	Diode	
D3	MA338	Diode	
D4	MA182	Diode	
D5,6	MA151K	Diode	
D7	YWHZ2BLL	Diode	
D8	MA1039-M	Diode	
D9-14	MA151K	Diode	
D15	MA151WA	Diode	
D16	MA151K	Diode	
R1	YF2116822JT	Carbon	8.2K ohms 1/10W
R2	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R3,4	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R5	YF2116113JT	Carbon	11K ohms 1/10W
R6	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R7	YF2116113JT	Carbon	11K ohms 1/10W
R8	YF2116563JT	Carbon	56K ohms 1/10W
R9,10	YF2116333GT	Carbon	33K ohms 1/10W
R11	YF2116222GT	Carbon	2.2K ohms 1/10W
R12	YF2116101JT	Carbon	100 ohms 1/10W
R13	YF2116222GT	Carbon	2.2K ohms 1/10W
R14,15	YF2116331JT	Carbon	330 ohms 1/10W
R16,17	YF2116333GT	Carbon	33K ohms 1/10W
R18	YF2116101JT	Carbon	100 ohms 1/10W
R19	YF2116100JT	Carbon	10 ohms 1/10W
R20	YF2116222GT	Carbon	2.2K ohms 1/10W
R22	2116910JT	Carbon	91 ohms 1/10W
R24	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R25	YF2116123JT	Carbon	12K ohms 1/10W
R26	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R27	ERJ6GEYJ102	Carbon	1K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R28,29	YF2116331JT	Carbon	330 ohms 1/10W
R31	YF2116222GT	Carbon	2.2K ohms 1/10W
R32,33	YWR1220P752D	Metal	7.5K ohms
R34	YF2116332JT	Carbon	3.3K ohms 1/10W
R35,36	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R37	YF2116272JT	Carbon	2.7K ohms 1/10W
R38	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R39	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R40	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R41	YF2116473GT	Carbon	47K ohms 1/10W
R42	YF2116683GT	Carbon	68K ohms 1/10W
R43	YF2116104JT	Carbon	100K ohms 1/10W
R44	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R45	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R46	R1220P822D	Metal	8.2K ohms
R47	YWR1220P391D	Metal	390 ohms
R48	YW2116105JT	Carbon	1M ohms 1/10W
R49	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R50,51	YF2116104JT	Carbon	100K ohms 1/10W
R53	YF2116243JT	Carbon	24K ohms 1/10WF
R54	YF2116273GT	Carbon	27K ohms 1/10W
R55	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R56	YF2116331JT	Carbon	330 ohms 1/10W
R57	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R58	YF2116331JT	Carbon	330 ohms 1/10W
R59	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R60	YW2116182JT	Carbon	1.8K ohms 1/10W
R61	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R62	YF2116122JT	Carbon	1.2K ohms 1/10W
R63	YF2116821GT	Carbon	820 ohms 1/10W
R64	YF2116821GT	Carbon	820 ohms 1/10W
R65,66	YF2116471JT	Carbon	470 ohms 1/10W
R67	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R68,69	YF2116332JT	Carbon	3.3K ohms 1/10W
R70	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R71	YF2116471JT	Carbon	470 ohms 1/10W
R72,73	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R74,76	YF2116104JT	Carbon	100K ohms 1/10W
R77	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R78	YF2116330JT	Carbon	33 ohms 1/10W
R79	YF2116331JT	Carbon	330 ohms 1/10W
R81	YF2116681JT	Carbon	680 ohms 1/10W
R82	YF2116511JT	Carbon	510 ohms 1/10W
R83	YF2116222GT	Carbon	2.2K ohms 1/10W
R84	YF2116392JT	Carbon	3.9K ohms 1/10W
R85	YW2116182JT	Carbon	1.8K ohms 1/10W
R86	YF2116123JT	Carbon	12K ohms 1/10W
R87	YW2116182JT	Carbon	1.8K ohms 1/10W
R88	YF2116101JT	Carbon	100 ohms 1/10W
R89	YF2116122JT	Carbon	1.2K ohms 1/10W
R90	YF2116621JT	Carbon	620 ohms 1/10W
R91	YF2116272JT	Carbon	2.7K ohms 1/10W
R92	YF2116202JT	Carbon	2K ohms 1/10W
R93	YW2116182JT	Carbon	1.8K ohms 1/10W
R94	YF2116303GT	Carbon	30K ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R95	YF2116330JT	Carbon	33 ohms 1/10W
R96	YF2116222JT	Carbon	2.2K ohms 1/10W
R97	YF2116302GT	Carbon	3K ohms 1/10W
R98-101	YF2116751JT	Carbon	750 ohms 1/10W
R102	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R103	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R104	ERDS1TJ750	Carbon	75 ohms 1W
R105	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R107	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R108	YF2116684JT	Carbon	680K ohms 1/10W
R109-112	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R113,114	ERJ6GEYJ223	Carbon	22K ohms 1/10W
R115	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R116	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R117	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R118	YF2116224JT	Carbon	220K ohms 1/10W
R119	YWR1220P332D	Metal	3.3K ohms
R120	YWR1220P223D	Metal	22K ohms
R121	YFR1220P392D	Metal	3.9K ohms
R122	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R123	YF2116220JT	Carbon	22 ohms 1/10W
R124	YF2116220JT	Carbon	22 ohms 1/10W
R126	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R127	YW2116182JT	Carbon	1.8K ohms 1/10W
R128-131	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R132	YF2116222GT	Carbon	2.2K ohms 1/10W
R133	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R134	YF2116752JT	Carbon	7.5K ohms 1/10W
R135	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R136,137	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R138,139	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R140	YF2116122JT	Carbon	1.2K ohms 1/10W
R141	YF2116821GT	Carbon	820 ohms 1/10W
R142	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R143	YF2116471JT	Carbon	470 ohms 1/10W
R144	YF2116750JT	Carbon	75 ohms 1/10W
R145	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R146,147	YF2116332JT	Carbon	3.3K ohms 1/10W
R148	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R149	YF2116471JT	Carbon	470 ohms 1/10W
R150	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R151	YF2116332JT	Carbon	3.3K ohms 1/10W
R152	YF2116683GT	Carbon	68K ohms 1/10W
R153	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R154	YF2116683GT	Carbon	68K ohms 1/10W
R155	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R156	YF2116334JT	Carbon	330K ohms 1/10W
R157	ERJ6GEYJ393	Carbon	39K ohms 1/10W
R158	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R159	YF2116202JT	Carbon	2K ohms 1/10W
R160	YF2116201JT	Carbon	200 ohms 1/10W
R161	YF2116201JT	Carbon	200 ohms 1/10W
R162	YF2116202JT	Carbon	2K ohms 1/10W
R163	YW2116105JT	Carbon	1M ohms 1/10W

REF.NO.	PART NO.	DESCRIPTION	
R164	YF2116683GT	Carbon	68K ohms 1/10W
R165	YF2116203JT	Carbon	20K ohms 1/10W
R166	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R167	ERJ6GEYJ562	Carbon	5.6K ohms 1/10W
R168	ERJ6GEYJ102	Carbon	1K ohms 1/10W
R169	ERJ6GEYJ103	Carbon	10K ohms 1/10W
R170	ERJ6GEYJ472	Carbon	4.7K ohms 1/16W
R171	ERJ6GEYJ103	Carbon	10K ohms 1/10W
VR1	EVML3GA00B53	Variable Resistor	5KB ohms
VR2-4	EVML3GA00B13	Variable Resistor	1K ohms
VR5	EVML3GA00B23	Variable Resistor	2K ohms
VR6	EVML3GA00B24	Variable Resistor	20K ohms
VR7,8	EVML3GA00B13	Variable Resistor	1K ohms
C1	ECEA1CKA100	Electrolytic	10 µF 16V
C2	YF400472XKT	Ceramic	4700 pF
C3	ECEA1CKS470	Electrolytic	47 µF 16V
C4	ECEA1CKA220	Electrolytic	22 µF 16V
C5	YF400101CHJT	Ceramic	100 pF
C6	YF400104FZT	Ceramic	0.1 µF
C7	YF400150CHJT	Ceramic	15 pF
C8	ECEA1CKS470	Electrolytic	47 µF 16V
C9	YF400102XKT	Ceramic	1000 pF
C10	YF400101CHJT	Ceramic	100 pF
C11	YW400560THJ	Ceramic	56 pF
C12	YF400104FZT	Ceramic	0.1 µF
C13	YF400102XKT	Ceramic	1000 pF
C14	YF400104FZT	Ceramic	0.1 µF
C15	YF400102XKT	Ceramic	1000 pF
C16,17	ECEA1CKS470	Electrolytic	47 µF 16V
C18,19	YF400200CHJT	Ceramic	20 pF
C20	YF400104FZT	Ceramic	0.1 µF
C21	ECEA1CKS470	Electrolytic	47 µF 16V
C22,23	YF400104FZT	Ceramic	0.1 µF
C24	YF400100CHJT	Ceramic	10 pF
C25	YF400682XKT	Ceramic	6800 pF
C26	YF400182XKT	Ceramic	1800 pF
C27	YF400272XKT	Ceramic	2700 pF
C28	ECEA1CKS470	Electrolytic	47 µF 16V
C29	YF400104FZT	Ceramic	0.1 µF
C30	ECEA1CKS470	Electrolytic	47 µF 16V
C31	ECEA0JKN330	Electrolytic	33 µF 6.3V
C32	ECEA1CKA220	Electrolytic	22 µF 16V
C33	YF400101CHJT	Ceramic	100 pF
C34	YF400100CHJT	Ceramic	10 pF
C35	ECEA1CN470S	Electrolytic	47 µF 16V
C36	ECEA1CKS470	Electrolytic	47 µF 16V
C37	ECEA1HKAR47	Electrolytic	0.47 µF 50V
C38	YF400103XKT	Ceramic	0.01 µF
C39	ECEA1HKA2R2	Electrolytic	2.2 µF 50V
C40	YF400104FZT	Ceramic	0.1 µF
C41	ECSF1VE685	Tantalum	6.8 µF 35V
C42,43	ECEA1CKS470	Electrolytic	47 µF 16V
C44	ECEA1CKA101	Electrolytic	100 µF 16V

REF.NO.	PART NO.	DESCRIPTION	
C45	ECEA1CKA100	Electrolytic	10 µF 16V
C46	ECEA1AKS470	Electrolytic	47 µF 10V
C47	ECEA1AKN470	Electrolytic	47 µF 10V
C48	ECEA1AKA221	Electrolytic	220 µF 10V
C49,50	YF400103XKT	Ceramic	0.01 µF
C51	ECEA1CKA100	Electrolytic	10 µF 16V
C52	ECEA1CU471	Electrolytic	470 µF 16V
C53	ECSF1CE476	Electrolytic	47 µF 16V
C54	ECEA1CKA101	Electrolytic	100 µF 16V
C55	ECEA0JKN470	Electrolytic	47 µF 6.3V
C56	ECEA1CKA101	Electrolytic	100 µF 16V
C57	YF400104FZT	Ceramic	0.1 µF
C58	YF400104FZT	Ceramic	0.1 µF
C59	ECSF1AE107	Electrolytic	100 µF 10V
C60	ECEA0JU331	Electrolytic	330 µF 6.3V
C61	YF400010CHDT	Ceramic	1 pF
C62	YF400020CHDT	Ceramic	2 pF
C63	YF400103XKT	Ceramic	0.01 µF
C64	ECEA1CKA220	Electrolytic	22 µF 16V
C65	ECEA1AU222	Electrolytic	2200 µF 10V
C66	ECEA1JU221	Electrolytic	220 µF 63V
C67	ECEA0JKA221	Electrolytic	220 µF 6.3V
C68	ECEA1CKA101	Electrolytic	100 µF 16V
C69	ECSF1AE476	Electrolytic	47 µF 10V
C70	YF400102XKT	Ceramic	1000 pF
C71,72	YF400104FZT	Ceramic	0.1 µF
C73	YF400224FZT	Ceramic	0.22 µF
C74	ECEA1AKA220	Electrolytic	22 µF 10V
C75	YF400103XKT	Ceramic	0.01 µF
C76	YF400102XKT	Ceramic	1000 pF
C77	YF400103XKT	Ceramic	0.01 µF
C78	ECEA0JKA221	Electrolytic	220 µF 6.3V
C79	ECQB1H102JF	Plastic	1000 pF
C80	ECSF1VE105	Tantalum	1 µF 35V
C81	ECEA1AKA101	Electrolytic	100 µF 10V
C82	ECEA1AKS470	Electrolytic	47 µF 10V
C83	YF400224FZT	Ceramic	0.22 µF
C84	ECEA1AKS470	Electrolytic	47 µF 10V
C85	YF400104FZT	Ceramic	0.1 µF
C86,87	YW400560UJJT	Ceramic	56 pF
C88	YF400120CHJT	Ceramic	12 pF CH
C89	YF400180CHJT	Ceramic	18 pF
C90	YF400121CHJT	Ceramic	120 pF
C91	YF400120CHJT	Ceramic	12 pF CH
C92	YF400220CHJT	Ceramic	22 pF
C93	YF400121CHJT	Ceramic	120 pF
C94	YF400220CHJT	Ceramic	22 pF
C95	YF400121CHJT	Ceramic	120 pF
C96	YF400120CHJT	Ceramic	12 pF CH
C97	YF400470CHJT	Ceramic	47 pF
C98	YF400101CHJT	Ceramic	100 pF
C99	YF400120CHJT	Ceramic	12 pF CH
C100	YF400330CHJT	Ceramic	33 pF
C101	YF400101CHJT	Ceramic	100 pF
C102	YF400270CHJT	Ceramic	27 pF

REF.NO.	PART NO.	DESCRIPTION	
C103	YF400101CHJT	Ceramic	100 pF
C104	YF400220CHJT	Ceramic	22 pF
C105	ECEA1AKA101	Electrolytic	100 µF 10V
C106	YF400103XKT	Ceramic	0.01 µF
C107	ECSF1CE476	Tantalum	47 µF 16V
C108	ECEA1CKA101	Electrolytic	100 µF 16V
C109	ECEA1AKN470	Electrolytic	47µF 10V
C110	YF400224FZT	Ceramic	0.22 µF
C111	ECEA1AKN470	Electrolytic	47 µF 10V
C112	ECEA1AKA221	Electrolytic	220 µF 10V
C113	YF400103XKT	Ceramic	0.01 µF
C114	YF400470CHJT	Ceramic	47 pF
C115	YF400101CHJT	Ceramic	100 pF
C116	YF400330CHJT	Ceramic	33 pF
C117	YF400101CHJT	Ceramic	100 pF
C118	YF400270CHJT	Ceramic	27 pF
C119	YF400101CHJT	Ceramic	100 pF
C120	YF400103XKT	Ceramic	0.01 µF
C121	ECSF1EE335	Tantalum	3.3 µF 25V
C122	ECEA1AKA220	Electrolytic	22 µF 10V
C123	YF400104FZT	Ceramic	0.1 µF
C124,125	YF400120CHJT	Ceramic	12 pF CH
C126	ECEA1AU471	Electrolytic	470 µF 10V
C127,128	ECEA0JU471	Electrolytic	470 µF 6.3V
C130	ECEA1AKS470	Electrolytic	47 µF 10V
C131	ECEA1CKA100	Electrolytic	10 µF 16V
L1	YWTLC1459Z	Coil	
L2	YWS100522391	Coil	390 µH
L3	YWTLC2045Z	Coil	
L4	YWS100522391	Coil	390 µH
L5	YWNL32390J	Coil	39 µH
L6	YWNL32T270J	Coil	27 µH
L7	EIL7EN006Q	Coil	
L8	EIL7EN007Q	Coil	
L9	EIL7EN006Q	Coil	
L10	EIL7EN004Q	Coil	
L11	EIL7EN005Q	Coil	
L12,13	EIL7EN004Q	Coil	
L14	EIL7EN005Q	Coil	
L15	EIL7EN004Q	Coil	
L16	YWNL32470J	Coil	
SW1	YWSSSS912L4	Slide Switch	
SW2	YWSSSS922L4	Slide Switch	
SW3,4	YWSSSS912L4	Slide Switch	
X1	YWM2DA26M602	Crystal Oscillator	
CF1	YWE117S	Ceramic Filter	
CF2-4	YWE112S	Ceramic Filter	
CF5	YWYS30545	Filter	
CF6,7	YWT7K26MBpF	Filter	
CF8,9	YWT5V0R5MLPF	Filter	

REF.NO.	PART NO.	DESCRIPTION
CF10	YWYS30549	Filter
CN1	FCN215Q050GA	Connector
E1-13	YW32BM12R5	Terminal
M19	YWV2HA0993A3	Shield Parts
M22	YWV2HA1122A2	Shield Parts
M40	YWCBE-14	Card Holder

MOTHER BOARD

REF.NO.	PART NO.	DESCRIPTION	
PCB5	YWVKZRC7AE5A	Printed Circuit Board Assy	
Q1	2SD1264A-PQ	Transistor	
R1	ERDS2FJ101	Carbon	100 ohms 1/4W
R2,3	ERDS2TJ473	Carbon	47K ohms 1/4W
R4	ERF5TK3R3	Wire Wound	3.3 ohms 5W
R5	ERDS2TJ430	Carbon	43 ohms 1/4W
R6,7	ERDS2TJ104	Carbon	100K ohms 1/4W
C1	ECEA1VU222	Electrolytic	2200 µF 35V
C2	ECEA2CU010	Electrolytic	1 µF 160V(SU)
C3	ECEA2CU470	Electrolytic	47 µF 160V
C4	ECQM2103KZ	Plastic	0.01 µF 200V
CN1-4	FCN214J050GA	Connector	
CN5	YWB7PVH	Connector	
CN7	YWB2BXHA	Connector	
CN8	YW530141310	Connector	
CN10	YW530140810	Connector	
CN11,13	YW530140710	Connector	
CN15	YWB3BXHA	Connector	
CN16	YW530140810R	Connector	
CN18	YW530140310	Connector	
CN19	YW530141210	Connector	
CN20	YW530141310	Connector	
CN21,22	YW530140310	Connector	
CN23	YW530140610	Connector	
CN6	YWB2PVH	Connector	
CN9	YW530141010	Connector	
CN14	YW530140410	Connector	
CN17	YW530141010	Connector	
E	YWSN5053	Fuse Holder	
E1,3	YWTM028B	Terminal	
M30	YWV7DA0193A4	Heat Sink	

REF.NO.	PART NO.	DESCRIPTION	
FRONT BOARD			
PCB6 (RTL)	YWVKBRC7AP1A	Printed Circuit Board Assy	
Q1-3	2SD636-QRS	Transistor	
D1	LN21RPH	LED	Red
D2,3	LN338GPH	Diode	
R1	ER0S2CKF1002	Metal	10K ohms 1/4W
R2	ER0S2CKF6201	Metal	6.2K ohms 1/4W
R3	ER0S2CKF1002	Metal	10K ohms 1/4W
R4	ER0S2CKF6201	Metal	6.2K ohms 1/4W
R5	ER0S2CKF9101	Metal	9.1K ohms 1/4W
R6	ER0S2CKF5101	Metal	5.1K ohms 1/4W
R7	ER0S2CKF7501	Metal	7.5K ohms 1/4W
R8	ER0S2CKF1801	Metal	1.8K ohms 1/4W
R9	ER0S2CKF8201	Metal	8.2K ohms 1/4W
R14	ERDS2TJ102	Carbon	1K ohms 1/4W
R15	ERDS2TJ683	Carbon	68K ohms 1/4W
R16	ERDS2TJ473	Carbon	47K ohms 1/4W
R17	ERDS2TJ392	Carbon	3.9K ohms 1/4W
R18	ERDS2TJ473	Carbon	47K ohms 1/4W
R19,20	ERDS2TJ103	Carbon	10K ohms 1/4W
R21	ERDS2TJ392	Carbon	3.9K ohms 1/4W
R22	ERDS2TJ683	Carbon	68K ohms 1/4W
R23	ERDS2TJ151	Carbon	150 ohms 1/4W
VR1,2	YWRJ13PR502	Variable Resistor	5K ohms
VR3	K11K11313B15	Variable Resistor	100K ohms
C1	YWR2S16V470M	Electrolytic	47 µF 16V
C2	ECQM1H104JZ	Plastic	0.1 µF 50V
C3	YWR2S16V470M	Electrolytic	47 µF 16V
C4,5	ECQM1H104JZ	Plastic	0.1 µF 50V
C6	YWR2S16V470M	Electrolytic	47 µF 16V
C7	ECQM1H104JZ	Plastic	0.1 µF 50V
SW1	YWS2150	Rotary Switch	
J10-13	ERDS2TC0	Jumper Resistor	
M47	YWA2NA0257A4	LED Spacer A	
M48	YWA2NB0257A4	LED Spacer B	
15-PIN CONNECTOR BOARD			
PCB7 (RTL)	YWVKCRC7AP1A	Printed Circuit Board Assy	
CN1	YWDA15STN	15-pin Connector	
26-PIN CONNECTOR BOARD			
PCB8 (RTL)	YWVKYRC7AP1A	Printed Circuit Board Assy	
CN101	SRB2A2126STH	26-pin Connector	
M26	YWV6GA0189A4	Connector Plate	
M27	YWV2PA0470A4	Insulator Washer	

REF.NO.	PART NO.	DESCRIPTION	
REAR PANEL BOARD			
PCB9 (RTL)	YWVKBRC7AP2A	Printed Circuit Board Assy	
IC1	YWUPC4064G2	IC	
IC2	NJM2901M	IC	
IC3	YWUPD4066BG	IC	
IC4	NJM2903M	IC	
IC5	NJM4556MB	IC	
IC6	YWUPD4053BG	IC	
IC7	NJM2903M	IC	
IC8	AQW214	Semiconductor	
IC9,10	YWTC4S66FR	IC	
IC101	YWMC145407F	IC	
IC102	NJM2903M	IC	
Q1	2SC1685-RS	Transistor	
Q2	2SD601-RS	Transistor	
D1-6	MA151K	Diode	
R1	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R2	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R3,4	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R5	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R6	ERJ3GEYJ203	Carbon	20K ohms 1/16W
R7	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R8,9	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R10	ERJ3GEYJ273	Carbon	27K ohms 1/16W
R11	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R12,13	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R14	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R15,16	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R17-19	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R20	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R21,22	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R23	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R24	ERJ3GEYJ203	Carbon	20K ohms 1/16W
R25	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R26,27	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R28-31	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R32,33	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R34	ERJ3GEYJ273	Carbon	27K ohms 1/16W
R35	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R36	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R37	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R38	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R39,40	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R41,42	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R43,44	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R45	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R46,47	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R48,49	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R50,51	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R53	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R54-56	ERJ3GEYJ103	Carbon	10K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R57	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R58	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R61	YWR0816P752D	Metal	7.5K ohms 1/16W
R62	YWR0816P103D	Metal	10K ohms 1/16W
R63	YWR0816P133D	Metal	13K ohms 1/16W
R64	YWR0816P103D	Metal	10K ohms 1/16W
R65	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R66	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R67	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R68	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R69,70	ERJ3GEYJ750	Carbon	75 ohms 1/16W
R71,72	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R73,74	YF2116151JT	Carbon	150 ohms 1/10W
R75	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R76	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R77	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R78,79	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R101	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R102	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R103	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R104	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R105	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R106	ERJ3GEYJ223	Carbon	22K ohms 1/16W
C1-3	ECEA1AKS470	Electrolytic	47 µF 10V
C4	YW5F104Z2VB	Ceramic	0.1 µF
C5	ECEA1CKA220	Electrolytic	22 µF 16V
C6	ECEA1AKS470	Electrolytic	47 µF 10V
C7	YW5F104Z2VB	Ceramic	0.1 µF
C8,9	ECEA1CKS470	Electrolytic	47 µF 16V
C10	ECEA1CKA100	Electrolytic	10 µF 16V
C11	YW5F104Z2VB	Ceramic	0.1 µF
C12	ECEA0JU471	Electrolytic	470 µF 6.3V
C13	YW5F104Z2VB	Ceramic	0.1 µF
C14	ECEA1AKS470	Electrolytic	47 µF 10V
C101	ECEA1AKS470	Electrolytic	47 µF 10V
C103	ECEA1CKA220	Electrolytic	22 µF 16V
C104-107	ECEA1CKA100	Electrolytic	10 µF 16V
SW101	YWSSSF042P6N	Slide Switch	
T1	YWMG15	High Freq Transformer	
CN1	YW530141510	15-pin Connector	
CN3	YW53014-0210	2-pin onnector	
CN8,9	YWP2203A	4-pin Connector	
CN10	YWP2197	Connector	
CN11	YWM1824	S-VHS Connector	
CN12	YWB2BXHA	2-pin Connector	
CN13.	S2PS2T2EF	2-pin Connector	
CN14	YW530140410	4-pin Connector	
TP5	YWTM028B	Test-pin	

REF.NO.	PART NO.	DESCRIPTION
D SUB BOARD		
PCB10 (RTL)	YWVKCRC7AP2A	Printed Circuit Board Assy
CN105	YWSDAB15S	15-pin Connector
POWER SUPPLY BOARD		
PCB11 (RTL)	YWSP-128	Printed Circuit Board Assy
IC101	EH-16	IC
IC201	AN1431T	IC
IC301	EH-17	IC
IC401	AN1431T	IC
TR101	2SK956	FET
TR102	2SD1913	Transistor
TR103	2SB560E	Transistor
TR201	2SC3694L	Transistor
TR202	2SA1020-Y	Transistor
TR203	2SC2240GR	Transistor
TR204	2SC2240GR	Transistor
TR205	2SC2240GR	Transistor
TR206	2SC2240GR	Transistor
TR207	2SC2240GR	Transistor
TR301	2SK1082	FET
TR302	2SC2240GR	Transistor
D101	YWD3SBA60	Diode
D102	YWERB38-05	Diode
D103	RGP10K	Diode
D104	RGP10K	Diode
D105	RGP10K	Diode
D106	YWER848-05	Diode
D107	YWER48-05	Diode
D108	YWER38-05	Diode
D109	YWEA81-004	Diode
D110	YWERB38-05	Diode
D201	YWFML-335	Diode
D202	YQERB38-05	Diode
D203	RGP10K	Diode
D204	YWERA81-004	Diode
D205	YWERA81-004	Diode
D206	YWERA81-004	Diode
D207	YWERA81-004	Diode
D208	YWERA81-004	Diode

REF.NO.	PART NO.	DESCRIPTION	
D301	RGP10K	Diode	
D302	YWERA81-004	Diode	
D303	YWERA81-004	Diode	
D402	ERD38-06	Diode	
ZD101	YWRD62EB	Zener Diode	
ZD102	YWRD24EB1	Zener Diode	
ZD103	YWRDE03B4	Zener Diode	
ZD201	YWRD30EB3	Zener Diode	
ZD301	YWRD62EB	Zener Diode	
ZD401,402	YWRD62EB	Zener Diode	
PC201	TLP732GRHLF2	Photo Coupler	
PC202	TLP732GRHLF2	Photo Coupler	
PC401	TLP732GRHLF2	Photo Coupler	
PC402	TLP732GRHLF2	Photo Coupler	
PC403	TLP732GRHLF2	Photo Coupler	
SCR101	5P4M	Thyrister	
R101	A53K100J	Metal	10 ohms 5W
R102	RSM1S243J	Metal	24K ohms 1W
R103	RSM1S243J	Metal	24K ohms 1W
R104	RSM1S104J	Metal	100K ohms 1W
R105	RSM1S104J	Metal	100K ohms 1W
R106	ERQ12AJ101P	Metal	100K ohms 1/2W
R107	ERD25FJ102	Carbon	1K ohms 1/4W
R108	ERG2ANJ510	Metal	0.22 ohms 1/2W
R108	ERD50FJ510	Carbon	51 ohms 1/2W
R110	ERD25FJ304	Carbon	300K ohms 1/4W
R111	ERD25FJ304	Carbon	300K ohms 1/4W
R112	ERD25FJ304	Carbon	300K ohms 1/4W
R113	ERD25FJ101	Carbon	100 ohms 1/4W
R114	ERG1SJ302	Metal	3K ohms 1W
R115	ERG1SJ302	Metal	47K ohms 1W
R116	ERG1SJ473	Metal	10 ohms 1W
R117	RSM1S683J	Metal	68K ohms 1W
R118	ERG1ANJ100	Metal	10 ohms 1W
R119	ER050CKF4704	Carbon	470K ohms 1/2W
R120	ERD25FJ102	Carbon	1K ohms 1/4W
R121	ERX2ANJ3R3	Metal	30K ohms 2W
R122	A53K100J	Metal	10 ohms 5W
R123	RSM1S243J	Metal	24K ohms 1W
R124	RSM1S243J	Metal	24K 1W
R201	RSM1S120J	Metal	12 homs 1W
R202	RSM1S683J	Metal	68K ohms
R203	RSM1S583J	Metal	68K ohms 1W
R204	RSM2S202J	Metal	2K ohms 2W
R205	RSM2S202J	Metal	2K ohms 2W
R206	RSM2S202J	Metal	2K ohms 2W
R207	ERD50FJ100	Carbon	10 ohms 1/2W
R208	RSM2SOR1J	Metal	0.1 ohms 2W
R209	RSM2SOR1J	Metal	0.1 ohms 2W
R210	ERD25FJ103	Carbon	10K ohms 2W
R211	ERD25FJ103	Carbon	10K ohms 1/4W
R212	ERD25FJ102	Carbon	1K ohms 1/4W
R213	ERD50FJ332	Carbon	3.3K ohms 1/2W
R214	ERD25FJ103	Carbon	10K ohms 1/4W
R215	ERD25FJ202	Carbon	2K ohms 1/4W

REF.NO.	PART NO.	DESCRIPTION	
R216	ERD25FJ102	Carbon	1K ohms 1/4W
R217	ERD25FJ102	Carbon	1K ohms 1/4W
R218	ERD25FJ102	Carbon	1K ohms 1/4W
R219	ERD25FJ102	Carbon	1K ohms 1/4W
R220	ERD25FJ101	Carbon	100 ohms 1/4W
R221	ERD25FJ103	Carbon	10K ohms 1/4W
R222	ERD25FJ103	Carbon	10K ohms 1/4W
R223	ERD25FJ103	Carbon	10K ohms 1/4W
R224	ERD25FJ103	Carbon	10K ohms 1/4W
R225	ERD25FJ242	Carbon	2.4K ohms 1/4W
R226	ERD25FJ333	Carbon	33K ohms 1/4W
R227	ERD25FJ362	Carbon	3.6K ohms 1/4W
R228	ERD25FJ103	Carbon	10K ohms 1/4W
R229	ERD25FJ202	Carbon	2K ohms 1/4W
R230	ERD25FJ102	Carbon	1K ohms 1/4W
R301	ERG1SJ104	Metal	100K ohms 1W
R302	ERG2ANJ120	Metal	12 ohms 2W
R303	ER!12HJ220	Metal	22 ohms 1/2W
R304	ERD25FJ102	Carbon	1K ohms 1/4W
R305	ERX2SJR33	Metal	0.3 ohms 2W
R306	ERD25FJ101	Carbon	100 ohms 1/4W
R307	ERD25FJ694	Carbon	680K ohms 1/4W
R308	ERD25FJ684	Carbon	680K ohms 1/4W
R309	ERD25FJ684	Carbon	680K ohms 1/4W
R310	ERD25FJ101	Carbon	100 ohms 1/4W
R311	ERD25FJ752	Carbon	7.5K ohms 1/4W
R401	ERG1ANJ220	Metal	22 ohms 1W
R402	ERD25FJ202	Carbon	2K ohms 1/4W
R403	ERG2ANJ823	Metal	82K ohms 2W
R404	ERG2ANJ823	Metal	82K ohms 2W
R405	ERG2ANJ823	Metal	82K ohms 2W
R406	ERD25FJ242	Carbon	2.4K ohms 1/4W
R407	ERD25FJ103	Carbos	10K ohms 1/4W
R408	ERD25FJ393	Carbon	39K ohms 1/4W
R409	ERD25FJ393	Carbon	43K ohms 1/4W
R410	ERD25FJ333	Carbon	33K ohms 1/4W
R411	ERD25FJ152	Carbon	1.5K ohms 1/4W
R412	ERD25FJ622	Carbon	6.2K ohms 1/4W
VR201	EVND4AA00B13	Variable Resistor 1K ohms	
VR401	EVND4AA00B13	Variable Resistor 1K ohms	
C101	ECQU2A224KN	Film	0.22µF
C102	ECQU2A224KN	Film	0.22 µF
C103	DE1110E102MA	Ceramic	1000 pF
C104	DE1110E102MA	Ceramic	1000 pF
C105	DE1410E222MA	Ceramic	2200 pF
C107	ECOS2GA271EA	Electrotic	220 µF
C108	ECOS2GA271EA	Electrotic	207 µF
C109	ECQE6103KZ	Film	0.01 µF
C110	ECEA1HNX220	Electrotic	22 µF 50V
C111	ECEA1HN470S	Electrotic	47 µF 50V
C112	ECQV1H105JZ	Film	1 µF 50V
C113	ECQV1H473JZ	Film	0.047 µF 50V
C114	ECQE2105KS	Film	1 µF
C115	DEP223K-F	Film	0.022 µF
C201	DE1210BN102K	Ceramic	1000 pF

REF.NO.	PART NO.	DESCRIPTION	
C202	ECQE6103KZ	Film	0.01 µF 630V
C203	DE0907BN471K	Ceramic	470 pF
C204	ECQE4333KF	Film	0.033 µF 400V
C206	ECEA1VGE102	Electrotic	1000 µF 35V
C207,208	ECQE6103KZ	Film	0.01 µF
C209	ECEA1GFS101	Electotic	100 µF 4V
C210	RSM2S202J	Metal	2K ohms 2W
C211	DEP104K-F	Film	0.1 µF
C212	ECQV1H105JZ	Film	1 µF 50V
C213	ECQE6103KZ	Film	0.01 µF 630V
C301	ECQE6103KZ	Film	0.01 µF 630V
C302	DE0707BN221K	Ceramic	220 pF
C303	ECEA1VF470	Electrotic	47 µF 35V
C304	ECEA1HN220S	Electrotic	22 µF 50V
C305	ECQV1H474JZ	Film	0.47 µF
C306	DEP223K-F	Film	0.022 µF
C401	DE1210BN102K	Ceramic	1000 pF
C402	ECEA2DG470X	Electrotic	47 µF
C403	ECEA2DG470X	Electrotic	47 µF
C404	ECEA2DG470X	Electrotic	57 µF
C405	ECQE6103KZ	Film	0.01 µF
C406	ECQE6103KZ	Film	0.01 µF
C407	ECQV1H473JZ	Film	0.047 µF 50V
C408	ECQE6103KZ	Film	0.01 µF
CH101,102	YWSS28H25045	Line Filter	
CH103	DRAWM2-2K300	Choke Coil	
CH201	YWFD-265	Choke Coil	
CH202	HK05S0554000	Choke Coil	
CH401	CHDR8X115A7M	Choke Coil	
T101 ⚠	YWSPT128-1B	Transformer	
T301 ⚠	SPT128-2	Transformer	
CN101	YW350789-1	pin Connector	
CN201	YWB7PVH	7-pin Connector	
CN202	YWB2B-XH-A	2-pin Connector	
CN401	YWB2PVH	2-pin Connector	
E401	YWMERB-FGL3	3-pin Lug	
E402	YWAB3X2X4.500	Beads Core	
M41	MSP128ALCA02	Power Chassis	
M42	YWST-5044FM	Mount Angle	
M43	YWMSP128HS1B	Heat Sink	
M44	YW11P15-40	Heat Sink for TR102	
M45	YW90T-T0-3P	Rubber	
M46	YW90T-T0-90	Rubber	

ACCESSORY PARTS/PACKAGING PARTS

REF.NO.	PART NO.	DESCRIPTION
CN110	YFCNR-1204P	4-pin Connector
CN111	YWNP5D2V	Connector
M51	YWV8QA3054AN	Operating Instructions
M54	XZB26X40C05	Polyethylene Bag
M55	XZB45X63C05	Polyethylene Bag
M56	YWT20X35C03	Polyethylene Bag
M57	YWV9CA2068AN	Packaging Assy

REMOTE CONTROL BOX WV-CB700A

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION
CN10	HR10A10R10P	10-pin Connector
CN11,12	YWBNC-BRZ-1	BNC Connector
M1	YWV5WB1271A3	Front Panel
M2	YWV5DA0312A4	Ornament
M3	YWV5RA0273B3	Knob
M4	YWV5KA1160A3	Operating Case
M5	YWV6EA0150A3	Lid
M6	YWV4JA0374A4	Spring
M7	YWV5RB0030A4	Knob
M9	YWV1FA0064A4	Nut
M10	YWV4JA0375A4	Spring
M11	YWV7QA2599A4	Operating Label
M13	YWV1EA0220A4	Special Screw
M14	YWV1KA0141A4	Washer
M15	YWV4JA0373A4	Spring
M16	YWV2FA0552A4	Cushion
M17	YWV5RA0258A4	Knob
M18	YWV5RB0281A4	Knob
M19	YWV2NA0368A4	Spacer
M20	YWV5RA0279B3	Knob
M22	YWV2JA0080A4	Bracing Strut
M23	YWV2FA0540A4	Cushion
M25	YWV5EA1050A4	Cover Plate
M26	YWV6EA0151A3	Lid
M27	YWV5KA1159A1	Rear Case
M28	YWV2SA1981A4	Mounting Angle
M29	YFA2PA0053B4	Insulator
M30	YWA2PA0054A4	Washer
M31	YFV1KA0023B4	Washer
M32	YWV7QA3067A4	Main Label
M33	YWV7SA1634A4	Label
M34	YWV5LA0047A4	Rubber Foot

MAIN BOARD

REF.NO.	PART NO.	DESCRIPTION
PCB1 (RTL)	YWVKZCB7AP1A	Printed Circuit Board Assy
IC1	YWNJM78M05FA	IC
IC2	YWUPD74HC32G	IC
IC3	UPD74HC132G	IC
IC4	UPD74HC125G	IC
IC8	YWUPD4051BG	IC
IC10	NJM2904M	IC
IC12	NJM2903M	IC
IC13	NJM2904M	IC
IC14	MN18888CUL	LSI
IC15	YWM51957BFP	IC
Q1,2	2SD1819-QRS	Transistor
Q3	2SB1219-QRS	Transistor
D1,3	MA143	Diode
D6	MA141K	Diode
D7	MA143	Diode
D8	MA141K	Diode
D9	MA165	Diode
R1,2	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R3	ERJ8GCS0R00	Carbon 0 ohms 1/16W
R5	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R6	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R7	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R10,15	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R16	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R17	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R18,19	ERJ3GEYJ221	Carbon 220 ohms 1/16W
R22	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R23	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R24	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R25	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R26	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R30	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R31	ERJ3GEY0R00	Carbon
R32,34	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R35	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R38	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R39	ERJ3GEYJ101	Carbon 100 ohms 1/16W
R46	YWR0816P103D	Metal 10K ohms 1/16W
R47	YWR0816P303D	Metal 30K ohms 1/16W
R48	YWR0816P103D	Metal 10K ohms 1/16W
R51	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R52-54	ERJ3GEYJ102	Carbon 1K ohms 1/16W
R57	ERJ3GEYJ273	Carbon 27K ohms 1/16W
R58-63	ERJ3GEYJ272	Carbon 2.7K ohms 1/16W
R64	ERJ3GEYJ273	Carbon 27K ohms 1/16W
R65,67	ERJ3GEY0R00	Carbon 0 ohms 1/16W
R68	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W
R69,70	YWR0816R104D	Metal 100K ohms 1/16W
R71	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION	
R72	YWR0816P302D	Metal	3K ohms 1/16W
R73	YWR0816R473D	Metal	47K ohms 1/16W
R74	YWR0816R104D	Metal	100K ohms 1/16W
R75	YWR0816P302D	Metal	3K ohms 1/16W
R76	YWR0816R473D	Metal	47K ohms 1/16W
R77	YWR0816R104D	Metal	100K ohms 1/16W
R78-85	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R86-93	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R100-102	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R104	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R106	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R107	YWR0816P123D	Metal	12K ohms 1/16W
R108	YWR0816P472D	Metal	4.7K ohms 1/16W
R109	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R110	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R121	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R123	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R124	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R126	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R128-130	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R139	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R140-143	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R176	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R177,178	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R195	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R206	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R209	ERJ3GEY0R00	Carbon	0 ohms 1/16W
R211	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R212-215	ERJ3GEYJ101	Carbon	100 ohms 1/16W
Z1	YWRKM10L503F	Block Resistor	
C1	ECEA1CKA101	Electrolytic	100 µF 16V
C2	YW5F104Z2VB	Ceramic	0.1 µF
C3	ECEA0JKS101	Electrolytic	100 µF 6.3V
C4	ECEA0JS470	Electrolytic	47 µF 6.3V
C5	YW5CH101J5VB	Ceramic	100 pF
C8	ECEA0JS470	Electrolytic	47 µF 6.3V
C9	YW5CH101J5VB	Ceramic	100 pF
C15,23	ECEA0JS470	Electrolytic	47 µF 6.3V
C27	YW5CH101J5VB	Ceramic	100 pF
C30	YW5CH151J5VB	Ceramic	150 pF
C31	ECEA0GKS470	Electrolytic	47 µF 4V
C32	ECEA1CKS470	Electrolytic	47 µF 16V
C33	ECEA0JS470	Electrolytic	47 µF 6.3V
C34,35	YW5CH151J5VB	Ceramic	150 pF
C36	ECEA0JKS101	Electrolytic	100 µF 6.3V
C37	ECEA0JKA221	Electrolytic	220 µF 6.3V
C38	ECSF1AE476	Tantalum	47 µF 10V
	YWS21A476	Electrolytic	47 µF 10V
C39	YW5F104Z2VB	Ceramic	0.1 µF
C40	ECSF1AE476	Tantalum	47 µF 10V or
	YWS21A476	Electrolytic	47 µF 10V
C41	ECSF1AE476	Tantalum	47 µF 10V
	YWS21A476	Electrolytic	47 µF 10V
C42	YW5F104Z2VB	Ceramic	0.1 µF
C43	ECEA0JKA221	Electrolytic	220 µF 6.3V

REF.NO.	PART NO.	DESCRIPTION	
C44	ECEA1HKSR47	Electrolytic	0.47 µF 50V (KS)
C46	YW5CH330J5VB	Ceramic	33 pF
C47,48	ECEA1CKS470	Electrolytic	47 µF 16V
C49,52	YW5F104Z2VB	Ceramic	0.1 µF
C53	YW5F104Z2VB	Ceramic	0.1 µF
C54	ECSF1VE104	Tantalum	1 µF 35V
C55	ECEA0JS470	Electrolytic	47 µF 6.3V
C86	YW5F104Z2VB	Ceramic	0.1 µF
C90	ECEA1HKSR47	Electrolytic	0.47 µF 50V (KS)
L1,2	YWNL32100J	Coil	10 µH
L4	YWNL321R0J	Coil	1 µH
SW18	YWSSSS913L4	Slide Switch	
X1	EF0GC8004A4	Oscillator	
CN1	YW530151010	10-pin Connector	
CN2	YW530150410	4-pin Connector	
CN4	YWDA15PTN	15-pin Connector	
CN6	ILWY30SD15T	30-pin Connector	
M24	YWV2SA1983A4	Mounting Angle	

SWITCH BOARD

PCB2 (RTL)	YWVKZRCB7P2A	Printed Circuit BoardAssy	
IC6	MN4051BS	IC	
IC7	MN4051BS	IC	
IC9	MN4051BS	IC	
IC11	NJM2902M	IC	
Q4-6	2SD1819-QRS	Transistor	
D11	LN338GPH	Diode	
D12	LN238RPH	Diode	
R111	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R112	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R113	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R114	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R115	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R116	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R117-119	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R120	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R131	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R132,133	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R134	ERJ3GEYJ471	Carbon	470 ohms 1/16W
R135,136	ERJ3GEYJ153	Carbon	15K ohms 1/16W

REF.NO.	PART NO.	DESCRIPTION
R137,138	ERJ3GEYJ273	Carbon 27K ohms 1/16W
R144-147	ERJ3GEYJ152	Carbon 1.5K ohms 1/16W
R148	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R149,150	ERJ3GEYJ153	Carbon 15K ohms 1/16W
R151	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R152	ERJ3GEYJ203	Carbon 20K ohms 1/16W
R153,154	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R155-166	ERJ3GEYJ152	Carbon 1.5K ohms 1/16W
R167	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R168	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R169	ERJ3GEYJ682	Carbon 6.8K ohms 1/16W
R170	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R171	ERJ3GEYJ203	Carbon 20K ohms 1/16W
R172	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R173,174	ERJ3GEYJ153	Carbon 15K ohms 1/16W
R175	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R179-186	YWR0816P392D	Metal 3.9K ohms 1/16W
R189	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R190,191	ERJ3GEYJ153	Carbon 15K ohms 1/16W
R192	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R193	ERJ3GEYJ203	Carbon 20K ohms 1/16W
R194	ERJ3GEYJ393	Carbon 39K ohms 1/16W
R196	ERJ3GEYJ473	Carbon 47K ohms 1/16W
R197	ERJ3GEYJ471	Carbon 470 ohms 1/16W
R198	ERJ3GEYJ682	Carbon 6.8K ohms 1/16W
R199	ERJ3GEYJ103	Carbon 10K ohms 1/16W
R200	ERJ3GEYJ203	Carbon 20K ohms 1/16W
R201	ERJ3GEYJ133	Carbon 13K ohms 1/16W
R202	ERJ3GEYJ471	Carbon 470 ohms 1/16W
VR1-4	K11K11324B15	Variable Resistor 20K ohms
VR5,6	YWRJ13P203	Variable Resistor 20K ohms
VR7	K11K11324B15	Variable Resistor 20K ohms
VR8	K11K11324B25	Variable Resistor 20K ohms
C21,22	ECEA0JS470	Electrolytic 47 µF 6.3V
C24	ECEA0JS470	Electrolytic 47 µF 6.3V
C25,26	YW5CH101J5VB	Ceramic 100 pF
C28	ECEA1CKS470	Electrolytic 47µF 16V
C45	YW5CH101J5VB	Ceramic 100 pF
C61-64	YW5F104Z2VB	Ceramic 0.1 µF
C70,71	ECEA1HKSR47	Electrolytic 0.47µF 50V (KS)
C72,73	YW5F104Z2VB	Ceramic 0.1 µF
C74-82	ECEA1HKSR47	Electrolytic 0.47µF 50V (KS)
C83	YW5F104Z2VB	Ceramic 0.1 µF
C84,85	ECEA1HKSR47	Electrolytic 0.47µF 50V (KS)
C87-89	YW5F104Z2VB	Ceramic 0.1 µF
C91	ECEA1HKSR47	Electrolytic 0.47Fµ 50V (KS)
C92	YW5F104Z2VB	Ceramic 0.1 µF
C93	ECEA0JS470	Electrolytic 47 µF 6.3V
C94	ECEA0GKS470	Electrolytic 47 µF 4V
SW1,2	YWMBP312C	Toggle Switch
SW3	YWMBP312B	Toggle Switch
SW4	YWMBP312C	Toggle Switch
SW5	YWMBP312G	Toggle Switch
SW6	YWMBP312B	Toggle Switch
SW7	YWSS1016SPLA	Rotary Switch

REF.NO.	PART NO.	DESCRIPTION
SW8	YWMBP312C	Toggle Switch
SW9	YWS2150	Rotary Switch
SW10	YWMBP312B	Toggle Switch
SW11	YWS2150	Rotary Switch
SW13	YWSSSS223	Slide Switch
SW14	YWSKHHBS	Push Switch
SW15-17	YFKHH10914	Special Switch
SW19	YWSSCUA	Micro Switch
CN7	ILWY30PD15T	30-pin Connector
CN8	YWILWY6PD15T	6-pin Connector
TP1	YW32BM5A	Test- Pin
M21	YWA2NB0257A4	Spacer
M35	YWV2PA0591A4	Insulater Paper

REC SWITCH BOARD

PCB3 (RTL)	YWVKZRCB7P3A	Printed Circuit BoardAssy
SW12	YWB3F9100	Switch
CN9	YWILWY6SD15T	6-pin Connector

ACCESSORY PARTS/PACKAGING PARTS

E101	YWWVCA10B02U	RCB Cable Assy
M51	YWV8QA3055AN	Operating Instructions
M53	XZB26X40C05	Polyethylene Bag
M57	YWV9CA2069AN	Packaging Assy

ORDER NO. BSD9609004T8

Technical Information

Remote Control Unit

WV-RC700A

Subject : Power Board Improvement

Symptom : The Camera Power Output Transistor Q101 (2SA1535-RS) on the Schematic Diagram of Mother Board has been broken and 100V DC for VP mode does not output.

Cause : Q101 may break to over-current by the external noise such as Primary Power Supply.
Could not cut-off (protector) when Power Switch turn on.

Remedy : Q101 has been changed from 2SA1535-RS to 2SA1501PQ, R208, R292 and R297 have been changed their types and values.
Q201 (2SB792) and R291 have been changed their type and value.
Q101, R208, R292 and R297 have been changed from May 1996 production, Q201 and R291 have been changed from September 1996 production.

Changed location of the Schematic Diagrams of the Mother Board and Power Board are as follows:

MOTHER BOARD

(See Page 29)

Q101

▨

2SA1535-RS
↓
2SA1501PQ

POWER BOARD

▨

(See Page 41)

Panasonic

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⚠ WARNING

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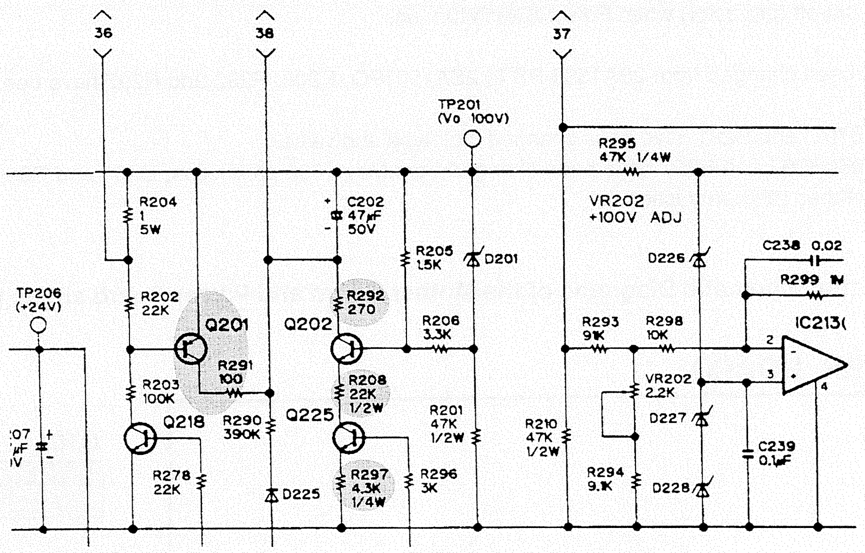
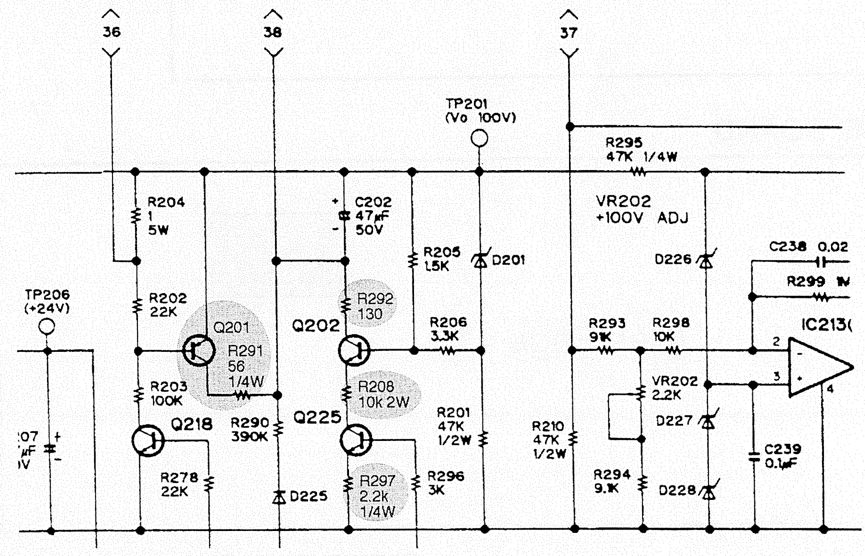
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Schematic Diagram of Power Board

Before Modification

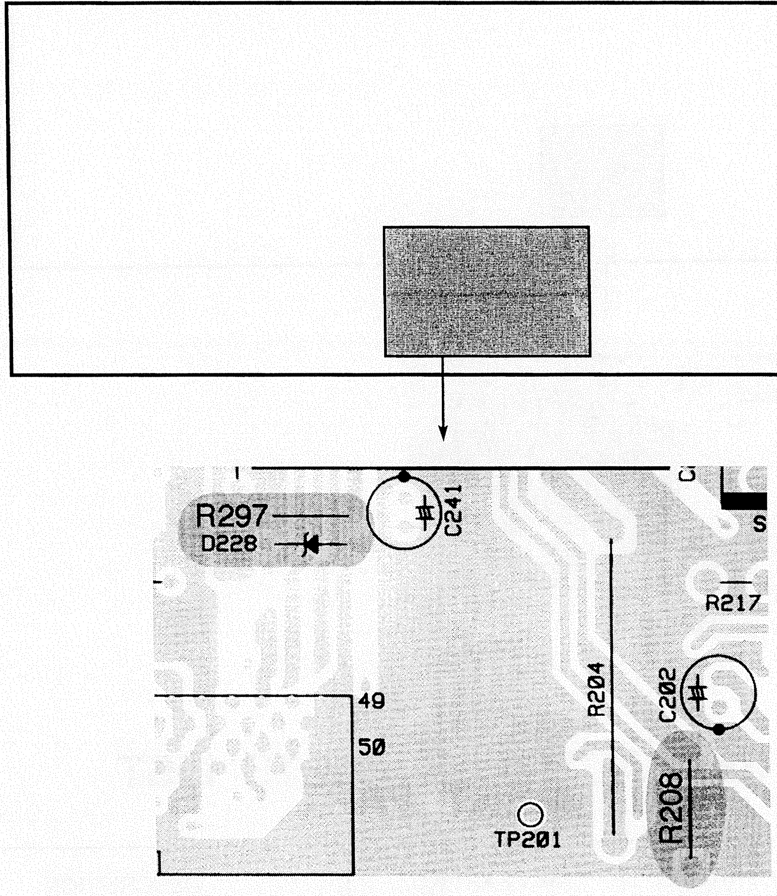

36
38
37
TP201
(Vo 100V)
R295
47K 1/4W
VR202
+100V ADJ
R204
1
5W
C202
47μF
50V
R205
1.5K
D201
D226
C238 0.02
R299 1W
TP206
(+24V)
R202
22K
Q201
Q202
R292
270
R206
3.3K
R293
91K
R298
10K
IC213
R291
100
R203
100K
R208
22K
1/2W
VR202
2.2K
Q218
R290
390K
Q225
R201
47K
1/2W
R210
47K
1/2W
D227
C239
0.1μF
R278
22K
D225
R297
4.3K
1/4W
R296
3K
R294
9.1K
D228

After Modification

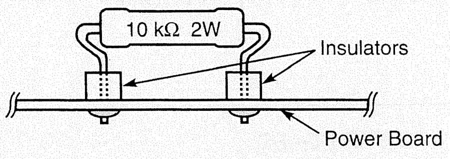

36
38
37
TP201
(Vo 100V)
R295
47K 1/4W
VR202
+100V ADJ
R204
1
5W
C202
47μF
50V
R205
1.5K
D201
D226
C238 0.02
R299 1W
TP206
(+24V)
R202
22K
Q201
Q202
R292
130
R206
3.3K
R293
91K
R298
10K
IC213
R291
56
1/4W
R203
100K
R208
10k 2W
VR202
2.2K
Q218
R290
390K
Q225
R201
47K
1/2W
R210
47K
1/2W
D227
C239
0.1μF
R278
22K
D225
R297
2.2k
1/4W
R296
3K
R294
9.1K
D228

Conductor View of Power Board

POWER BOARD (COMPONENT SIDE)

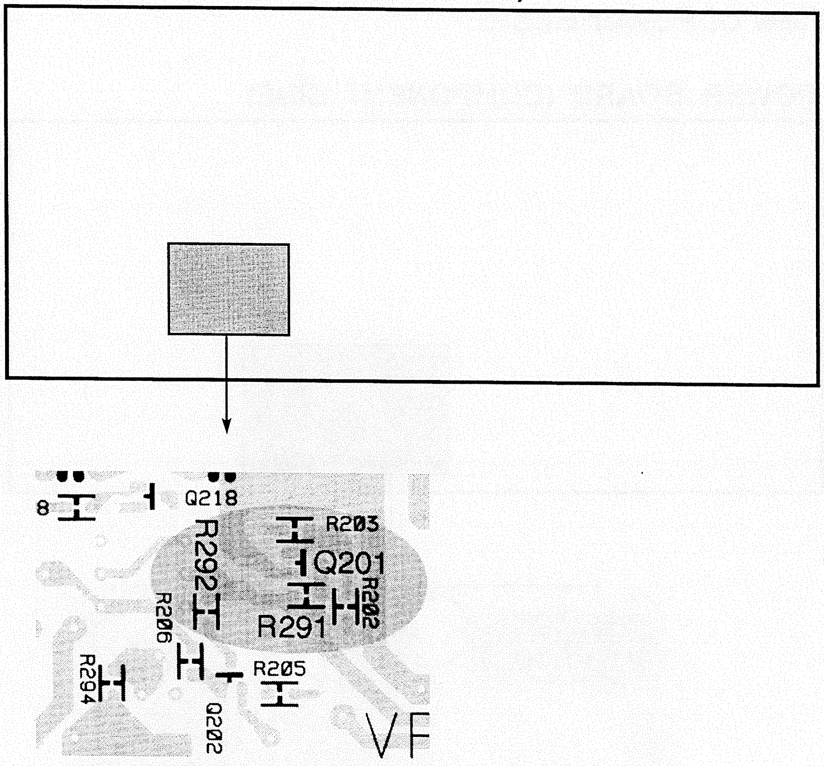

R297
D228
C241
C
S
R217
R204
C202
49
50
TP201
R208

- R208 10 kΩ 2W has been mount onto the Power Board is as follows:


10 kΩ 2W
Insulators
Power Board

Forming as shown above and use two Insulaors for both lead before insert R208 (10 kΩ 2W) onto the Power Board.

POWER BOARD (PATTERN SIDE)


8
Q218
R203
R292
Q201
R206
R202
R291
R294
R205
Q202
VF

REPLACEMENT PARTS LIST

REF. NO.	ORIGINAL PART NO.	NEW PART NO.	DESCRIPTION
MISCELLANEOUS			
Q101	2SA1535-RS	2SA1501PQ	Transistor
POWER BOARD			
Q201	2SB792A-RS	2SB710A-RS	Transistor
R208	ERD50TJ223	ERG2SJ103	Metal Resistor 10k 2W
R291	YF2116101JT	YF2116560JT	Carbon Resistor 56 1/4W
R292	YF2116271JT	YF2116131JT	Carbon Resistor 130 1/10W
R297	ERDS2TJ432	ERDS2TJ222	Carbon Resistor 2.2k 1/4W

ORDER NO. BSD9705010S8

Service Manual

Remote Control Unit
WV-RC700A

Supplement - 1

Please file and use this supplement service manual together with original service manual for Model No. WV-RC700A Order No. AVS9307729C8 and BSD9609004T8.

LIST OF MODIFICATION

- The some units have been out of clamp level from the August 1996 Production.

Causes:

The deviation of the DC 100V against the signal level at the high luminance level because of the modification of Transistor 2SA1501PQ in the May 1996 Production.

One more factor is the adjustments have been made under the MPX mode, so that the level deviation at the VP mode (using the Analog Switch IC for switching the modulation signal of the Command and G/L) have been affected.

Countermeasure:

1. Change C71 on the Modulator Board from 0.1 μF to 0.047 μF.
   Delete Q8 and R28, change C8 on the Demodulator Board from 0.22 μF to 0.1 μF.

REF. NO.	ORIGINAL PART NO.	NEW PART NO.	DESCRIPTION
MODULATOR BOARD			
C71	YF400104FZT	YF400473XK	Ceramic 0.047 μF
DEMODULATOR BOARD			
Q8	2SA1022-C	Delete	-----
R28	ERJ6GEYJ562	Delete	-----
R129	-----	ERJ6GEYJ2R2	Carbon Resistor 2.2 ohms 1/10W
C8	YF400224FZT	YF400104FZT	Ceramic 0.1 μF

2. Change the adjustment mode of the Modulator Board and Demodulator Board from the MPX mode to the **VP** mode.
3. The signal level of the Demodulator Board from 1.0 Vpp to **0.9 Vpp** ((14) Video Gain Adjustment on the page 14 of the Service Manual).
4. The Command signal level of the Modulator Board from 1.5 Vpp to **1.3 Vpp** ((20) Command Level Adjustment on the page 16 and (25) Command Modulation Adjustment on the page 18 of the Service Manual).
5. The G/L signal level and MPX Incom Carrier level adjustments of the Modulator Board are also change from the MPX mode to **VP** mode, but both levels are same as the Service Manual.

Panasonic

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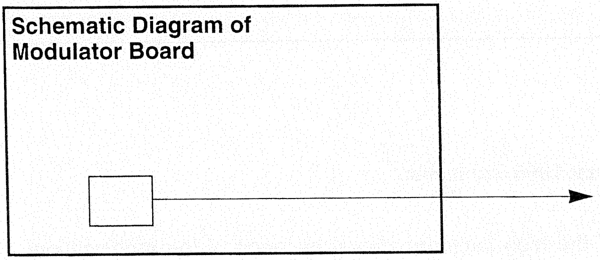
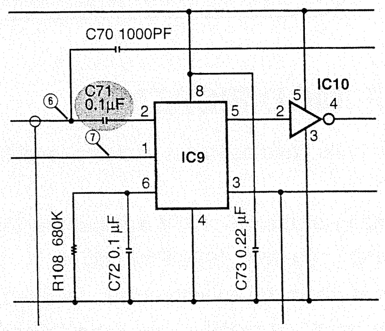
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

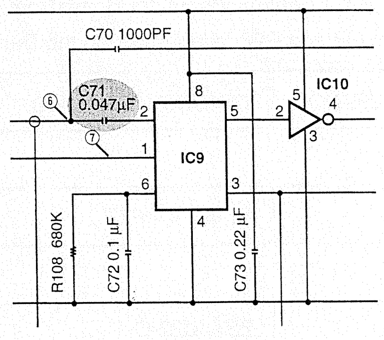
1. Modulator Board


Schematic Diagram of Modulator Board

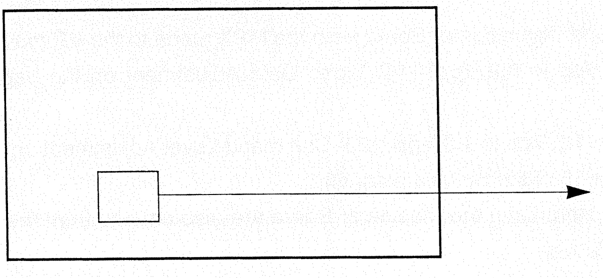
■ Before Modification

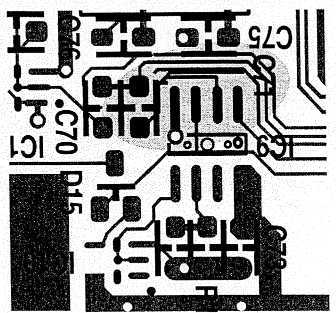

C70 1000PF
C71 0.1µF
⑥
⑦
2
1
6
8
5
3
4
IC9
IC10
5
4
2
3
R108 680K
C72 0.1 µF
C73 0.22 µF

■ After Modification

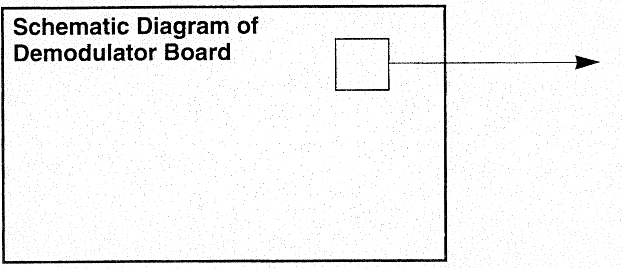

C70 1000PF
C71 0.047µF
⑥
⑦
2
1
6
8
5
3
4
IC9
IC10
5
4
2
3
R108 680K
C72 0.1 µF
C73 0.22 µF

Modulator Board (Pattern Side)

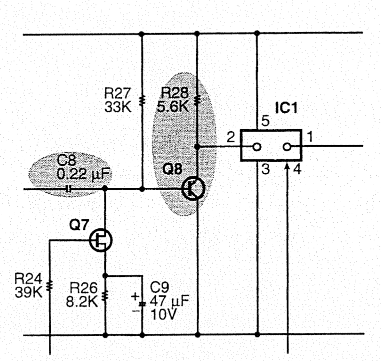



C75
C76
C70
IC1
D15
IC9

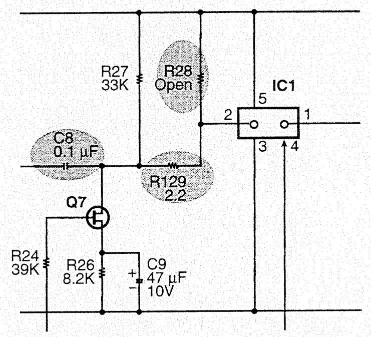
2. Demodulator Board


Schematic Diagram of
Demodulator Board

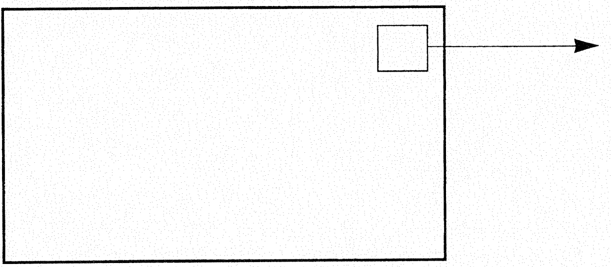
■ Before Modification

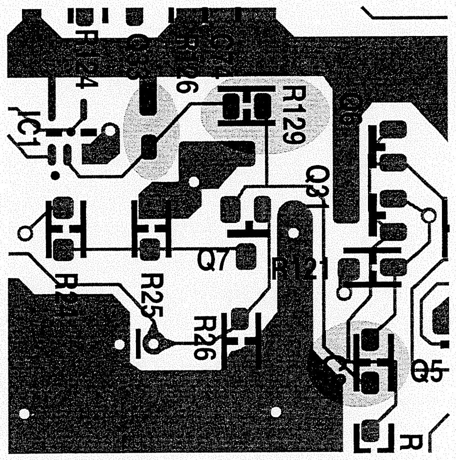

R27
33K
R28
5.6K
IC1
5
2
1
3
4
C8
0.22 µF
Q8
Q7
R24
39K
R26
8.2K
C9
47 µF
10V

■ After Modification

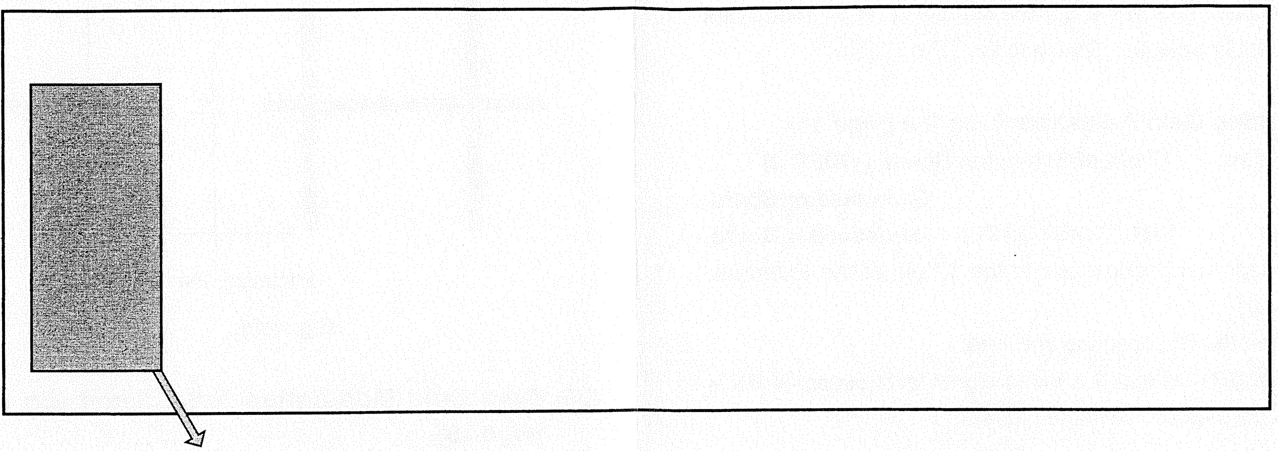

R27
33K
R28
Open
IC1
5
2
1
3
4
C8
0.1 µF
R129
2.2
Q7
R24
39K
R26
8.2K
C9
47 µF
10V

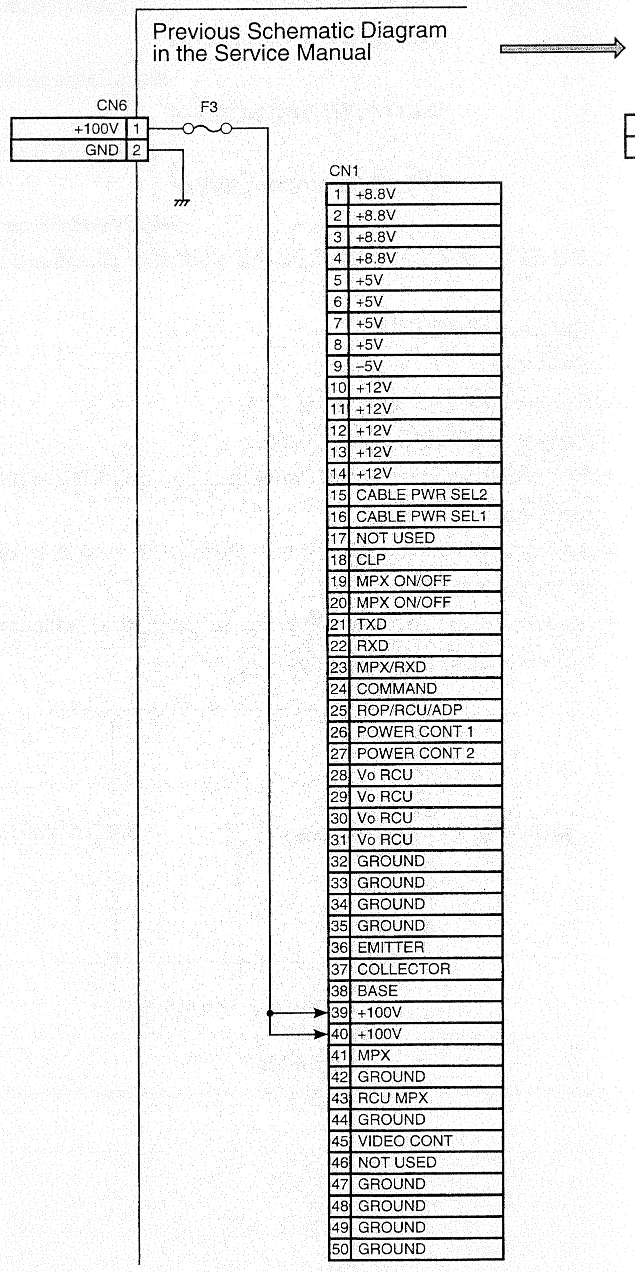
Demodulator Board (Pattern Side)



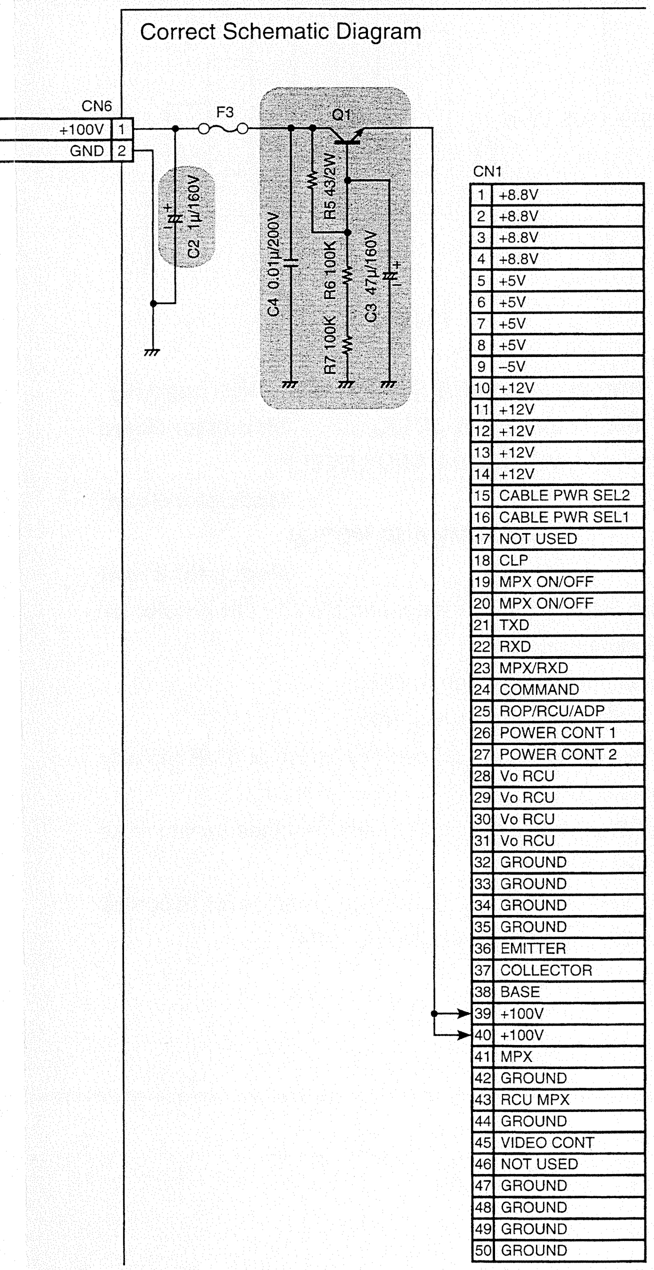

IC1
R129
Q31
Q7
R121
R25
R26
Q5

3. Mother Board




Previous Schematic Diagram
in the Service Manual
CN6
+100V
GND
1
2
F3
CN1

1	+8.8V
2	+8.8V
3	+8.8V
4	+8.8V
5	+5V
6	+5V
7	+5V
8	+5V
9	–5V
10	+12V
11	+12V
12	+12V
13	+12V
14	+12V
15	CABLE PWR SEL2
16	CABLE PWR SEL1
17	NOT USED
18	CLP
19	MPX ON/OFF
20	MPX ON/OFF
21	TXD
22	RXD
23	MPX/RXD
24	COMMAND
25	ROP/RCU/ADP
26	POWER CONT 1
27	POWER CONT 2
28	Vo RCU
29	Vo RCU
30	Vo RCU
31	Vo RCU
32	GROUND
33	GROUND
34	GROUND
35	GROUND
36	EMITTER
37	COLLECTOR
38	BASE
39	+100V
40	+100V
41	MPX
42	GROUND
43	RCU MPX
44	GROUND
45	VIDEO CONT
46	NOT USED
47	GROUND
48	GROUND
49	GROUND
50	GROUND


Correct Schematic Diagram
CN6
+100V
GND
1
2
F3
Q1
C2 1µ/160V
C4 0.01µ/200V
R5 43/2W
R6 100K
R7 100K
C3 47µ/160V
CN1

1	+8.8V
2	+8.8V
3	+8.8V
4	+8.8V
5	+5V
6	+5V
7	+5V
8	+5V
9	–5V
10	+12V
11	+12V
12	+12V
13	+12V
14	+12V
15	CABLE PWR SEL2
16	CABLE PWR SEL1
17	NOT USED
18	CLP
19	MPX ON/OFF
20	MPX ON/OFF
21	TXD
22	RXD
23	MPX/RXD
24	COMMAND
25	ROP/RCU/ADP
26	POWER CONT 1
27	POWER CONT 2
28	Vo RCU
29	Vo RCU
30	Vo RCU
31	Vo RCU
32	GROUND
33	GROUND
34	GROUND
35	GROUND
36	EMITTER
37	COLLECTOR
38	BASE
39	+100V
40	+100V
41	MPX
42	GROUND
43	RCU MPX
44	GROUND
45	VIDEO CONT
46	NOT USED
47	GROUND
48	GROUND
49	GROUND
50	GROUND

4. Adjustment Procedure

- All adjustments in the Service Manual at he VP mode (Set the Cable Selection Switch to the VP position).

(14) Video Gain Adjustment (on the page 14)

Test Point: **17 pin of Extension Board (VIDEO 2)**
Demodulator Board
Adjust: **VR1 (VIDEO GAIN)** **Demodulator Board**

- Connect the Oscilloscope to the 17 pin of the Extension Board.
- Trigger the Oscilloscope at H rate.
- Adjust VR1 so that the Video signal level becomes 0.9 ± 0.05 Vp-p as shown in the Fig. 4-8.

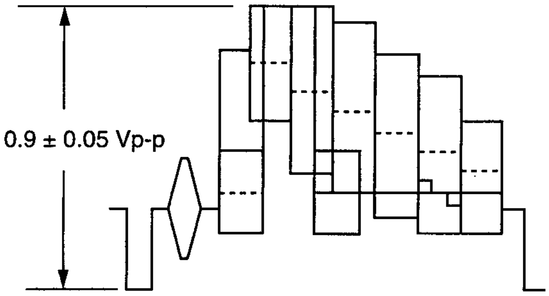


Fig. 4-8

(20) Command Level Adjustment (on the page16)

Test Point: **TP6 (GEN-LOCK)** **Modulator Board**
Adjust: **VR5 (COMMAND LEVEL)**
Modulator Board
VR8 (COMMAND MOD-2)
Modulator Board

- Set the SW3 to OFF position and SW4 to ON position on the Modulator Board .
- Connect the Oscilloscope to TP6.
- Trigger the Oscilloscope at V rate.
- Set VR5 to its mechanical center position and VR7 to fully clockwise.
- Adjust VR8 so that the carrier level becomes minimum as shown in the Fig. 4-14.
- Adjust VR5 so that the Command signal level becomes 1.3 ± 0.2 Vp-p as shown in the Fig. 4-14.

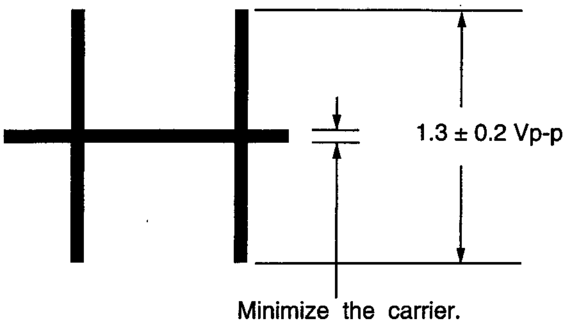


Fig. 4-14.

(25) Command Modulation Adjustment (on the page 18)

Test Point: **TP6 (GEN LOCK)** **Modulator Board**
Adjust: **VR7 (COMMAND MOD-1)**
Modulator Board
VR8 (COMMAND MOD-2)
Modulator Board
VR5 (COMMAND LEVEL)
Modulator Board

- Set SW1, SW3, and SW4 on the Modulator Board are as follows:
  SW1 and SW3: OFF
  SW4: ON
- Connect the Oscilloscope to TP6.
- Trigger the Oscilloscope at H rate.
- Set VR5 to its mechanical center position and VR7 to fully clockwise.
- Adjust VR8 so that the carrier on the Command signal becomes minimum.
- Adjust VR5 so that the Command signal level becomes 1.3 ± 0.1 Vp-p as shown in the Fig. 4-19.

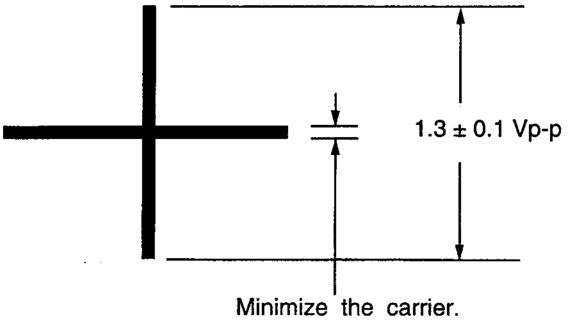


Fig. 4-19